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are Canada's Smartest Garments!
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RIDER PANTS · SHIRTS
and JACKETS

You bet! Famous G.W.G. "Cowboy Kings" are favourites with Canadians from Vancouver Island to Newfoundland. And no wonder! They're made from long-wearing, good-looking "SNOBAK" and "BUCKSKIN" denims, found only under the G.W.G. winged label. Insist on G.W.G. garments for ALL the family!

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Cowboys
Wear
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at the
Calgary Stampede

JULY 9th to 14th, 1956

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MEN'S "*FRISCO JEAN" SLACKS AND SHIRTS

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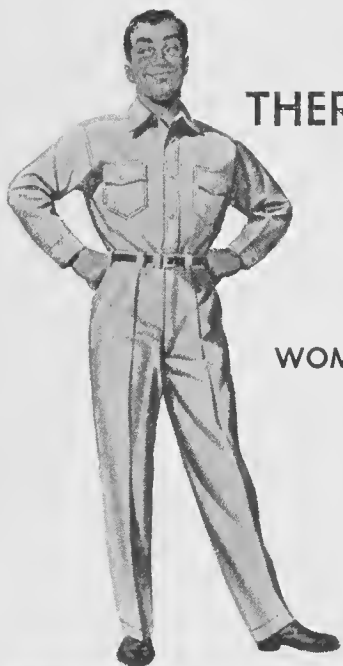


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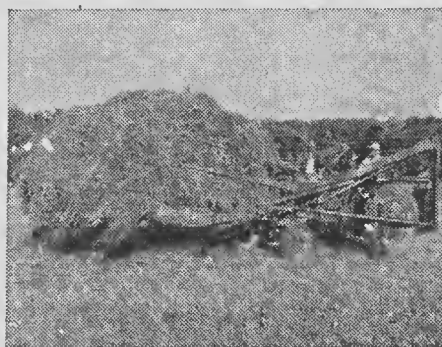
"*COWBOY KINGS" ARE MADE
FOR MEN, WOMEN AND
CHILDREN



**"Only Farmhand could make
a loader like the F-11
...it's a terrific value!"**



HERE'S MONEY-SAVING NEWS for farmers who handle hay. It's the brand new Farmhand F-11 Loader . . . a low-cost, high-lift loader for adjustable front end and tricycle-type tractors. The new F-11 handles 3500-lb. loads; lifts big loads way up—17 ft. from ground to heel of basket. There's a 10-ft. combination Hay Basket and Push-Off which mounts directly on the basic attachments carrier. The F-11 uses Farmhand's new-style, plug-on hydraulic pump which mounts on PTO; and is operated by simple two-bank control valve. There are many other features, like double-acting tilt cylinders and simplified mounting parts, that help make the F-11 one of your best loader-stacker buys!

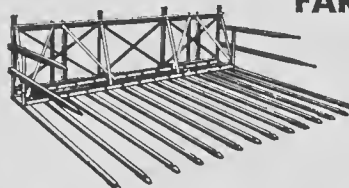


THE FAMOUS FARMHAND HEAVY-DUTY is the loader-stacker most-wanted by farmers. Its combination of 3500-lb. lift, 21-ft. reach and rugged construction can't be beat. Use it for sweeping, stacking, and, with Grapple Fork, for easy feeding. 11 "quick hitch" attachments make it handy all year 'round on dozens of tough jobs.



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TUBULAR STEEL TEETH, tapered full length, with reinforced points. 8' or 9' for Heavy-Duty Loader. 8' for F-11 Loader.

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THE *Country* GUIDE

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COVER: A boy and his dog! Music hath charms . . . ! Symbol of sunshine, and the warm, glad days when school is over, and care is thrown to the summer breezes, and the growing season is here for calves and foals and crops and lambs and boys and dogs! What utter contentment Eva Luoma has caught in this month's cover picture.

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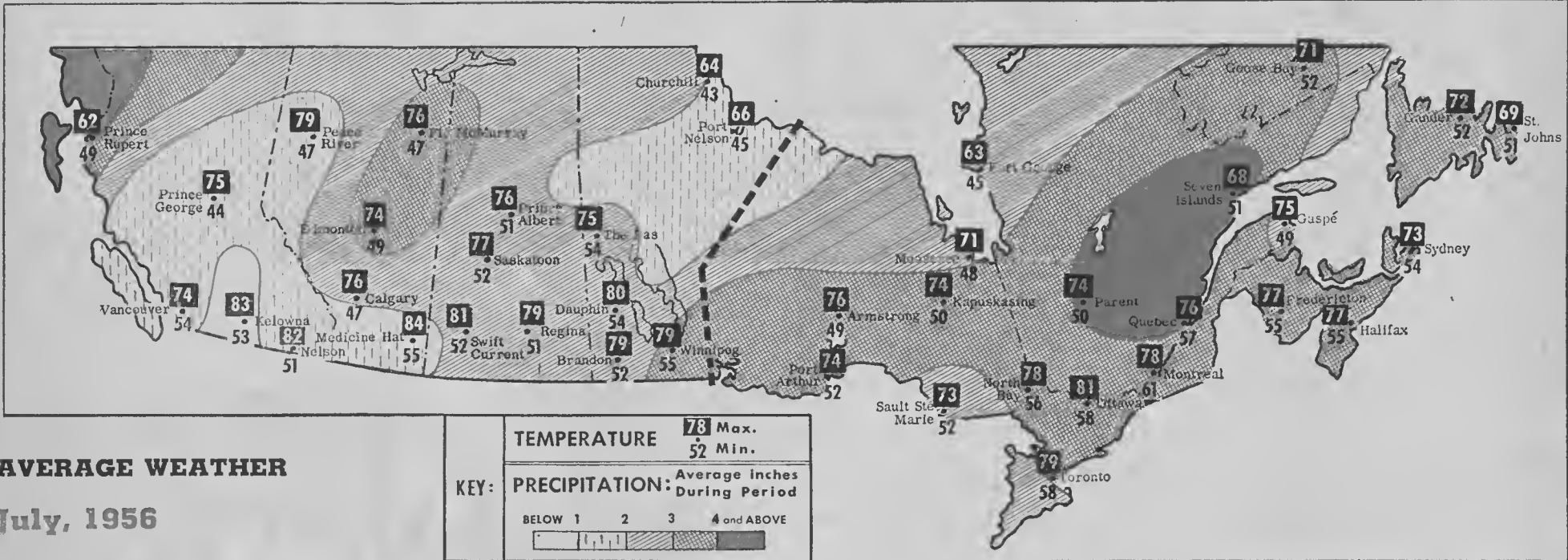
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Weather Forecast

Prepared by
DR. IRVING P. KRICK
and Associates

(Allow a day or two either way in using this forecast.
It should be 75 per cent right for your area, but
not necessarily for your farm.—ed.)



Alberta

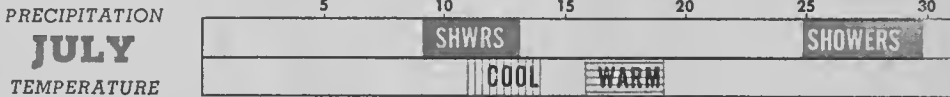
Quite a contrast in weather is in prospect for the Prairies this July. Alberta will be relatively cool and wet, whereas warm, dry conditions are expected to the east, principally in Manitoba. Frequent cloudiness will tend to hold temperatures down in Alberta, with monthly averages expected to be near, or slightly below, normal. Highest temperatures are likely during the forepart of the month, especially about the 5th to

10th. Cooler weather will prevail during the last two weeks. Showers will be more prevalent than usual. Likewise, rainfall in most localities will exceed the amounts normally experienced in July. The most important periods of unsettled weather are anticipated during the first three weeks. Rain will cause some hardship to mature vegetable crops, particularly in the irrigated districts, and to haying and summerfallow operations, but the over all benefit to grain and forage will be invaluable. ✓

Ontario

"Hot and dry" will characterize July weather in Ontario. Temperatures are expected to average several degrees, or more, above normal. Storminess will be infrequent, with clear days predominating. Highest temperatures are likely between the 15th and 20th, following on the heels of a moderate cool spell. Showers will be mostly light and infrequent due to the expected persistence of high pressure over the

province. Passage of the greater number of storms will be both to the south and east. Best chances for shower activity will be from the 9th to 14th and 25th to 30th. Amounts should be well below the normal for July, especially in northern Ontario. Prospects are somewhat better for eastern Ontario, where more generous rainfall is anticipated. The pinch of drought may be felt here and there. Productivity of pastures is expected to decline and growth and development of row crops could be retarded. ✓



Saskatchewan

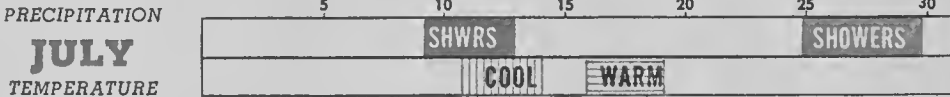
July weather will be received with mixed emotions in Saskatchewan, depending on your location. Western districts will experience frequent cloudiness and temperatures averaging near normal, maybe slightly below. In the east, temperatures are expected to be somewhat warmer, reaching a degree or two above normal for the month. Highest temperatures will prevail during the first two weeks. Rainfall should be plentiful in the west, decreasing considerably with

movement east. Indeed, rather droughty conditions could develop locally in eastern Saskatchewan. Showers are most likely in the first three weeks of the month. However, a high-pressure system centered over Manitoba and Ontario, for the greater part of the time, will force storms southeastward leaving little in the way of moisture for the eastern prairies. Productivity of forage crops is expected to decline in eastern districts, although small grains should develop nicely throughout the province. ✓

Quebec

Warm, occasionally hot, weather will pervade Quebec in July. Highest temperatures are likely between the 15th and 20th, preceded by the month's only extended spell of cool weather. The July average is expected to be several degrees above normal. Greatest temperature departures are anticipated in the remote districts of the north, namely in the vicinity of Hudson Bay. Rainfall will be variable. Showers over most of the province will be spotty and light. Total precipitation

should not measure up to normal; rather, appreciably below normal amounts are anticipated in many districts. This is expected to be especially true in districts bordering on Ontario. Rainfall will become more generous to the east. Indeed, seasonal amounts are in prospect for the Eastern Townships and Gaspé Peninsula. Showers are most likely to be experienced between the 9th and 14th, 25th and 30th, with general rains in the extreme east, between the 5th and 10th and about the 20th. ✓



Manitoba

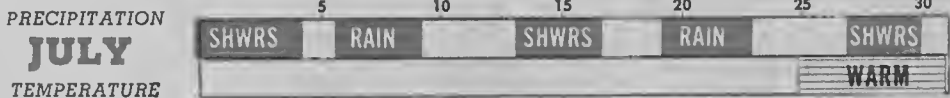
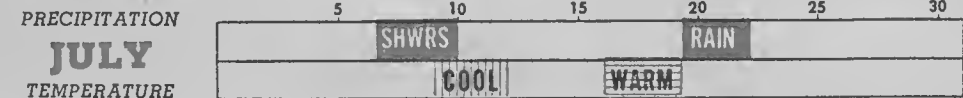
Under the influence of a large high pressure system over Manitoba and Ontario during much of the month, the province will be relatively warm and dry. Temperatures are expected to average up to several degrees above normal, with greatest departures occurring in the eastern districts. A spell of cool weather about the 10th should be the only break of consequence from high temperatures.

Storm systems will often be blocked, resulting in a predominance of clear days. Principal shower activity is expected between the 6th and 10th and there is a good chance of rainfall about the 20th. Total rainfall for July, however, is likely to be appreciably below normal, possibly almost negligible, relative to agricultural value, at some eastern stations. Condition of pastures and row crops could decline. Even heading and filling of wheat and other small grains could be impaired. ✓

Maritime Provinces

Warm and relatively wet weather is in prospect for the Maritimes. Temperatures will average two or three degrees above normal, although somewhat more seasonal along the immediate coast. An extended spell of rather high temperatures toward the end of the month will be responsible for the positive departures. Storms will move up the coast with relative frequency. General rains, however, are most likely between the

5th and 10th and on a day or two about the 20th. Otherwise, precipitation should be confined to showers. Total amounts for the month are expected to exceed normal in New Brunswick and Nova Scotia, diminishing northward to small deficiencies in northern Newfoundland and Labrador. Crops should do nicely, with adequate moisture and temperatures conducive to growth and development. Fire danger in the forest should be almost nil. ✓



IT ISN'T TRUE!

**THAT "GOVERNMENT" INSURANCE IN SASKATCHEWAN
IS THE CHEAPEST INSURANCE IN THE WORLD!**

Another perennial question: How do Saskatchewan rates for insurance compare with those in effect elsewhere? Saskatchewan government spokesmen invariably compare Saskatchewan rural rates with those in effect in metropolitan centres in arriving at astronomical totals as to the amounts the compulsory insurance has saved Saskatchewan.

But let us compare the new Saskatchewan rates paid by a farmer who owns a 1955 Chevrolet, and the rates Wawanesa charges a Manitoba farmer just across the line for virtually identical coverage except for the auto accident compensation feature of the Saskatchewan compulsory insurance.

The Saskatchewan farmer with a three-year no-claims record would pay: \$2 insurance charge on his driver's license, \$25 for compulsory insurance, and \$25 for a \$25-deductible package policy, or a total of \$52.

A Manitoba farmer entering his second year with Wawanesa qualifies for a 40 per cent no-claims discount. He would pay \$44.40 for a \$25-collision deductible policy with \$50,000-\$100,000 B.I. and \$5,000 property damage. For another 78 cents he could have B.I. and P.D. coverage extended to \$100,000 inclusive.

Let's compare the Saskatchewan urban rates with the Wawanesa rates in Brandon, a comparable city.

A Moose Jaw driver of a 1955 Chevrolet must pay \$2 extra for his driver's license, \$25 in compulsory insurance, and \$30 for a government \$25-deductible three-year no-claims package policy, or a total of \$57. The Brandon driver of the same model car on renewing his Wawanesa policy after a claims-free year would pay \$56.92.

**READ
WHAT
HAPPENS
IN
MANITOBA**

Reprint from April 1st issue of Canadian Underwriter

**VIRTUALLY IDENTICAL INSURANCE COSTS LESS
IN MANITOBA WITH *The Wawanesa***

WINTER CREDITS

Wawanesa insurance costs even less for motorists who do not drive in winter. No reductions are allowed by the Saskatchewan scheme. But in Manitoba, Wawanesa's winter credits reduce premiums cited above to as low as \$31.69.

PLATE GLASS CLAIMS

Saskatchewan government policyholders pay the first \$25 in plate glass claims except in cases of theft or malicious damage. Wawanesa pays all plate glass claims in full.

DOUBLE INJURY LIMITS

For an additional premium of 55 cents, Wawanesa doubles its bodily injury limits to \$100,000/\$200,000 and its property damage limits to \$10,000.

DRIVERS' FEES

Every Saskatchewan driver is compelled to pay \$2 into the insurance fund at the time he pays his annual licence fee. This raises the cost of Saskatchewan insurance by \$2 annually for each driver.

COMPENSATION INSURANCE

Wawanesa does not provide coverage exactly comparable with Saskatchewan's auto accident compensation but statistics indicate that the \$2 compulsory insurance charge paid by every Saskatchewan driver is more than sufficient by itself to cover the cost of compensation benefits.

PROOF POSITIVE!

Without this \$2 charge, the Saskatchewan farmer cited above, and other drivers outside the major cities, pay \$50 for government insurance. Comparable Wawanesa coverage in Manitoba costs \$44.40—or \$31.69 for those who obtain full winter credits.

**NO! IT JUST ISN'T TRUE THAT "GOVERNMENT" INSURANCE IN SASKATCHEWAN
IS THE CHEAPEST INSURANCE IN THE WORLD!**

***The Wawanesa* MUTUAL INSURANCE COMPANY**

HEAD OFFICE—WAWANESA, MAN.

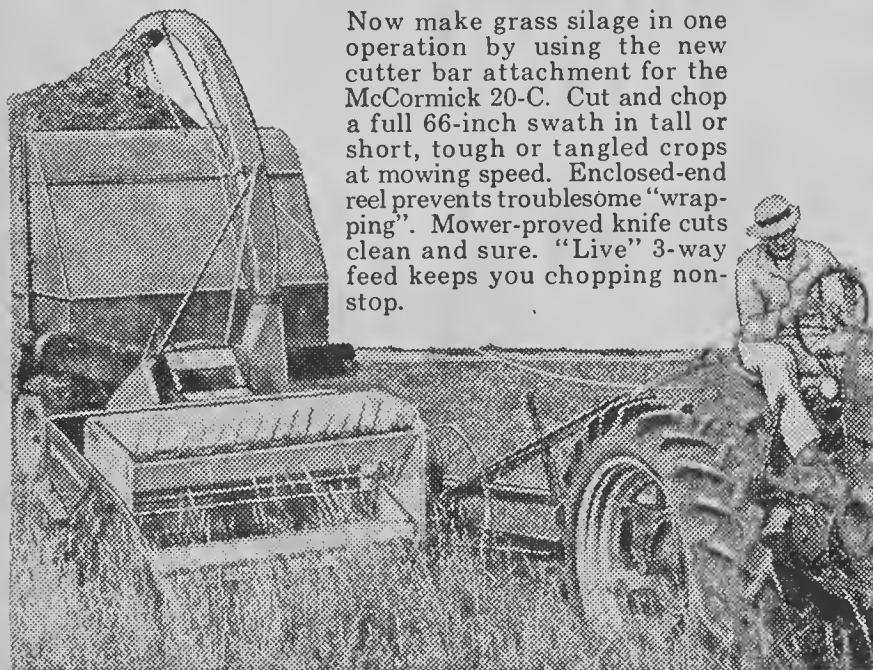
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EASTERN OFFICE—TORONTO, ONT.

Choice feed at new low cost! McCORMICK 20-C

FIELD HARVESTER

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Now make grass silage in one operation by using the new cutter bar attachment for the McCormick 20-C. Cut and chop a full 66-inch swath in tall or short, tough or tangled crops at mowing speed. Enclosed-end reel prevents troublesome "wrapping". Mower-proved knife cuts clean and sure. "Live" 3-way feed keeps you chopping non-stop.



Fast-switch harvest units—row crop, pick-up or cutter bar attachments—secured to basic unit with only 4 bolts. Turn blower spout for rear or side-delivery of chopped material. Get the 20-C with power take-off or 49 hp. engine and outchop them all—in cured hay, grass or corn—with less power!

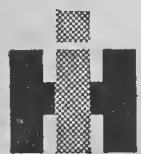
McCORMICK No. 45

Canada's Favorite Baler



McCormick No. 45 leads with up to 6 tons per hour capacity
 • Wide 52-inch low-level floating pickup • Floating auger adjusts to big or small windrows—automatically • Non-stop plunger slices each charge—packs bales uniformly • Longer bale chamber—makes neater, denser bales • Exclusive optional automatic bale density regulator • Exclusive knotter is simple and rugged • Power take-off or optional engine drive • Baler safeguards head off breakdowns and costly delays.

McCormick No. 55 bales up to 100 tons a day! Makes the big, heavy, easy-to-ship bales. Exclusive new automatic bale density regulator (optional). Twine-tie or wire-tie models. Pto or engine drive. Baler for the big jobs is the No. 55!



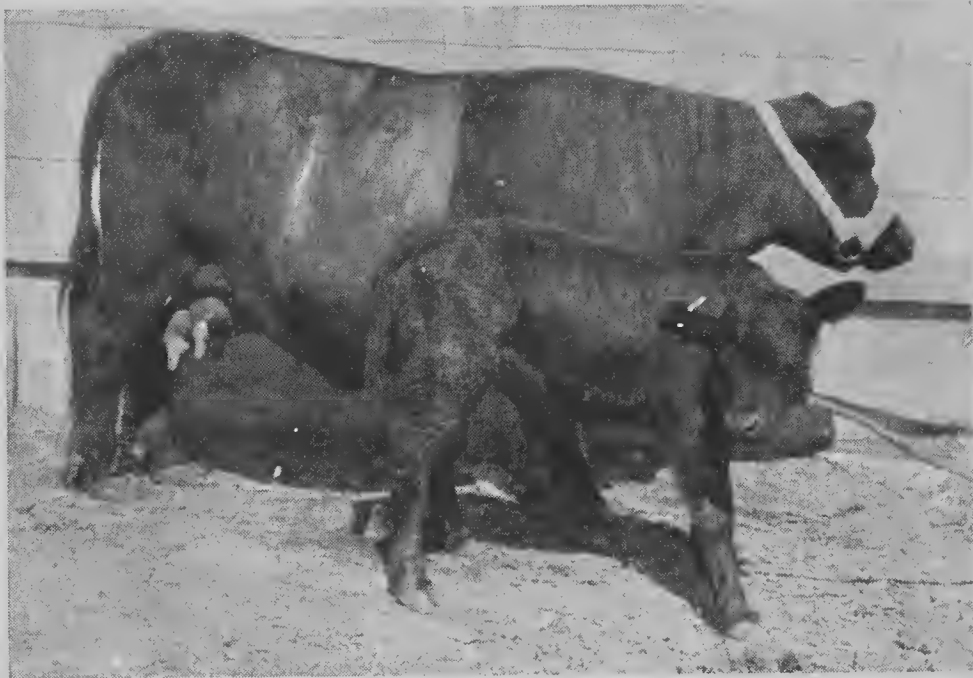
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FARM NOTES



[Guide photo]

A dwarf Aberdeen-Angus cow with the calf delivered by Caesarian operation at the University of Manitoba. The operation scar can be seen on the cow.

First Calf Born To Dwarf Cow in Canada

A DWARF cow, weighing only 500 pounds, has given birth to a calf at the Animal Science Division of the University of Manitoba. This is the first time, as far as is known, that a calf has been born to a dwarf cow anywhere in Canada, and the event is of great importance in the investigation of the growing menace of dwarfism in beef cattle. The University of Manitoba is the only research institution in Canada working on this problem.

The cow, an Aberdeen-Angus, aged 21 months, was anaesthetized while the calf was delivered by a Caesarian operation, which took two and a half hours, and was performed by Drs. Alfred Savage, N. Stranger and J. M. Isa of the Animal Science Division. The calf weighed 48 pounds at birth, which is almost normal, and as it has not shown any signs of dwarfism so far, it should be bigger than its mother in just a few months. Prof. E. W. Stringam, head of the department, said that there was no sign of a widened muzzle, which is a characteristic of dwarfism, and the calf stands well, without drooping its head as dwarfs usually do.

Switch from Progeny to Performance

A NEW beef testing program has been set up in Ontario by the provincial Department of Agriculture, on the advice of the Advanced Registry Board for Beef Cattle. This changes the project from progeny testing to performance testing.

The main objective is to identify young bulls which demonstrate their ability to gain rapidly and economically, in the belief that these are highly heritable characteristics. Breeders will not be asked to test a specified number of young bulls at present, but the number nominated will depend on the accommodation available at the Advanced Registry Station, Guelph. There will also be some authorized home testing when the station is full.

The official test will begin when a bull is eight months old, and will last

for 168 days. Breeders will be charged 75 per cent of the cost of feed consumed at the station, while the balance and other costs are met by the Board. At the end of the test, bulls will be graded choice, very good, commercial, plain and rejected, and those rejected and others failing to gain at the rate of two pounds a day will be sold for slaughter. The others will be returned to their owners.

Government View On School Milk Plans

IF the initiative comes from the provinces, the Federal Government is prepared to consider aid for any provincial plan to distribute milk in schools, according to a recent statement by the Rt. Hon. J. G. Gardiner, Minister of Agriculture. He also said that the government had already investigated and would help to pay for vending machines to dispense bottled milk in schools.

Urged in the Commons to adopt a school lunch program similar to that employed in the United States to help in the disposal of dairy surpluses, Mr. Gardiner said the government was willing to help, but none of the provinces had submitted any plans to them. He gave no indication of the extent to which federal aid would be granted to provincial schemes.

Tea Plants On the Island

UNTIL recently, no attempt had been made to grow tea at the Saanichton Experimental Farm on Vancouver Island since 1922. But in 1953, a few pounds of Tientsin tea seed arrived from Ceylon, and because this variety grows at comparatively high altitudes, there is a chance that it might thrive on the island.

It germinated well, and some of the plants in the greenhouse are now between two and three feet high. Single flowers appeared last winter. Some of the seedlings will be transplanted out-of-doors next spring, and it remains to be seen whether they will be hardier than the last lot, which were set out in 1915, but withered away in a few years.

Most profitable way to haul today!



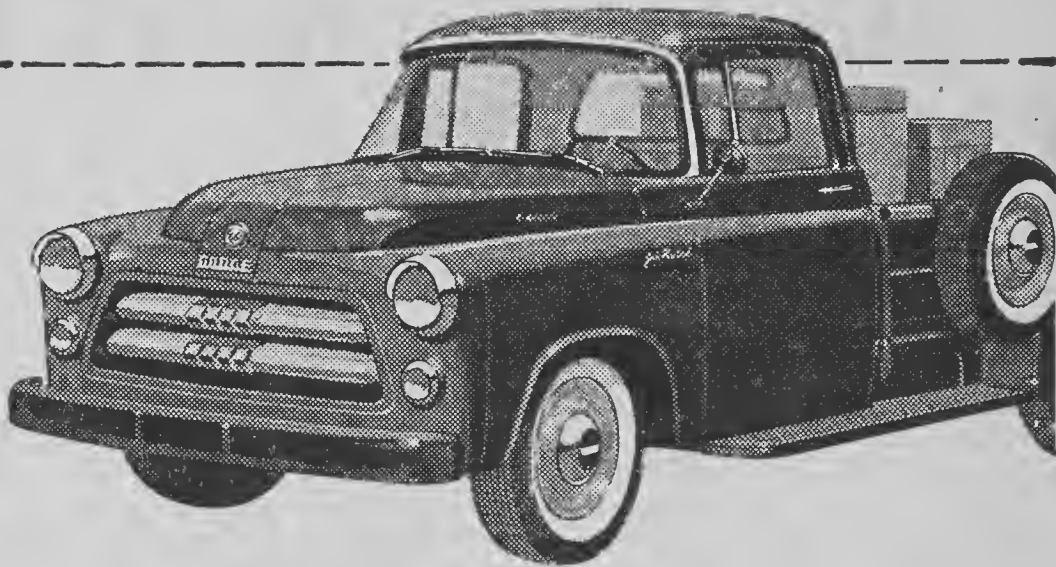
DODGE "Job-Rated" TRUCKS

**A TRUCK TO FIT
EVERY HAULING NEED**

LONG HAULS—Feature for feature, you can't beat a Dodge K8 model for over-the-road performance and economy! For example, you get the most efficient V-8 in the industry, the most powerful V-8 in its weight class, as *standard* equipment . . . with 201 horsepower to hurry your biggest loads along. Advanced-design hemispherical combustion chambers squeeze full power from regular gas, promote better mileage.

SHORT HAULS—Team up with a husky Dodge express . . . and you team up with the workingest hauling partner that money can buy! Under the hood, there's the new stepped-up 125-h.p. Dodge truck Six. And Dodge now offers you a choice of *three* express bodies—78" x 49", 90" x 54", and 108" x 54" . . . to provide plenty of load space. What's more, Dodge expresses have flat-flared sides and raised skid strips for easier loading and unloading.

ALL HAULS—Whatever your needs . . . from ½-ton to 65,000 lbs. G.C.W. . . . Dodge has a truck that's *right* for your job, *right* for your budget! Take your pick from expresses, panels, chassis and cab, and chassis with flat-face cowl models to accommodate a wide range of special bodies.



Farm workhorse or family errand boy, a Dodge express model answers your every transportation need on the farm. And its handsome styling will make all the neighbours sit up and take notice!

CHECK these DODGE MORE-FOR-YOUR-MONEY Features!

● **New push-button hauling!** With new push-button PowerFlite transmission, you just touch a button . . . step on the gas . . . and go! Available on all ½-ton models.

● **New higher payloads!** Increased gross vehicle weights on Dodge medium- and high-tonnage models mean more payload capacity . . . more profit on every trip.

● **New 12-volt electrical system!** Affords ample current for all electrical needs, assures superior starting and ignition performance. New generator provides maximum output even at low engine speed for improved battery charging under all driving conditions.

● **New features throughout!** New ignition-key starting! New tubeless tires standard! New stronger axles, springs, frames! New full-width wrap-around rear window available! Plus many other extra values! Feature for feature, Dodge trucks give you more for your money!

CHRYSLER CORPORATION OF CANADA, LIMITED

SEE YOUR DODGE-DE SOTO DEALER NOW FOR A DOLLAR-SAVING DEAL!

What are the world's fastest-selling combines?



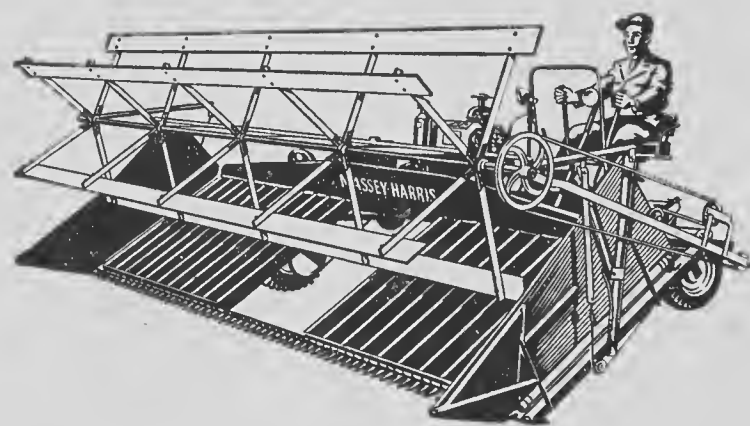
Massey-Harris! Here's why!

Why is it that all over the world more farmers buy Massey-Harris combines than any other make?

You get the answer the first time you drive a new Massey-Harris 80 or 90 SP Special through a heavy grain field. You quickly discover that a Massey-Harris combine is faster, smoother, more efficient than any combine you've driven before. It's *far* ahead in bushels-per-hour.

Every detail — from the 61 sealed bearings to the extra-large gas tank — has been carefully worked out to make sure you get years and years of top-capacity performance. In fact, these combines stand up so well for so long that when trade-in time comes you'll get more for a Massey-Harris than for any other used combine on the market.

Next time you drop in to see your Massey-Harris dealer, notice his big stock of replacement parts, his fine service facilities. Because he's selling the world's *best-selling* combines, he has to be prepared for a large volume of harvest-time business. He *has* to be ready, and he *is*!



NEW! Dual-Purpose MH20 Self-Propelled Swather is the perfect team-mate for an M-H 80 or 90. With an SP Swather you avoid disastrous weather loss by getting started early, and with no waiting for green spots to ripen. In an hour or less you can convert it to a self-propelled sprayer with a whopping coverage of 42 feet — and do more work faster, and at less cost, than with separate machines. Two PTO swather models also available.

*Ask your dealer for
a demonstration!*

Massey-Harris-Ferguson

Toronto, Canada

LIMITED

Farmers Say Shelterbelts Pay



Shelterbelts protect fields and farmsteads from the prairie winds, which cause erosion, leave the soil bare in winter, and may blast the crops in summer.

IN 1956, nearly 70 years after tree distribution to early prairie settlers began, Manitoba farmers are expected to plant an estimated 422 miles of field shelterbelts. This will be 75 more miles of trees than were planted in 1955, and the 3.5 million trees involved will be nearly four times the number planted in 1954, the first year of the project begun by the Manitoba Department of Agriculture.

Farmers in the three prairie provinces this year may be expected to plant in the neighborhood of nine million trees, despite the fact that since the first experimental farms on the prairies were established at Brandon, Manitoba, and Indian Head, Saskatchewan, in 1888, farmers of the Canadian great plains have previously planted nearly 300 million trees for farmstead and field shelterbelt purposes. Approximately 260 million of these were grown and distributed by the Forest Nursery Stations operated at Indian Head and Sutherland, Saskatchewan, by the federal government. The balance were produced largely between 1888 and 1903, by prairie experimental farms, and in recent years by the Horticultural Station at Brooks, and the Tree Nursery operated at Oliver by the Alberta Government. It is safe to estimate that substantially more than 100 thousand prairie farm homes now benefit from this 68-year program of tree distribution.

Why was such a program started, and why has it been continued for so long? The answer lies in the climate and topography of the prairie provinces. The long, 3,000-foot rise between Winnipeg and the Foothills of the Rocky Mountains is comparatively flat and treeless. Much of the southern parts of Saskatchewan and Alberta, principally the former, lie within the famous Palliser Triangle, and are semi-arid. It is precisely this relative dryness,

They rarely have precise calculations of increased yields, but rarely would a shelterbelt owner prefer not to have the shelter

by H. S. FRY

that has made it possible for Canada to become a world-famous producer of very high quality bread wheat.

NEVERTHELESS, the climate is cool, and the wind—often bitterly cold in winter—is principally from the northwest. These winds, which are uncomfortable in the winter, very noticeable until late in the spring, and sometimes hot and injurious to growing crops in the summer, represent a serious hazard, which can be modified by tree planting. A farmstead amply protected by trees on the north and west, offers protection to people and animals, and such shelter makes possible the growing of satisfactory garden and fruit crops, as well as ornamental shrubs and flowers.

Trees are admittedly effective as a protection against wind erosion. For many years, or until the terrible dryness and dust of the '30's arrived, shelterbelts were planted primarily for farmstead protection. During those years, homes were being developed, and communities built. The pioneers who settled in what are now the prairie provinces, especially between 1880 and 1910, fought the elements with much cruder equipment, and enjoyed fewer amenities, than are now available to their successors. They were the adventurers and experimenters in prairie living. In those days there were both reasons and good excuses for treeless farms. Today, while there may still be reasons, there are no valid excuses.

When the hungry, dirty '30's accentuated the normal dryness of the climate and developed a discouraging parade of dust storms, which moved millions of tons of rich fertile soil, field shelterbelt planting was born. For exactly the same reason that men here and there began to experiment with strip-cropping, trash cover, and underground blade cultivators, which would not disturb the trash on top, so, choice spirits began to question the necessity of leaving broad, bare stretches of country completely naked of trees.

One of these was Peter Kennedy, of Conquest, Saskatchewan, who had long been urging provincial and federal governments to begin some investigation of the practicability of field shelterbelts. He had in mind protecting the soil by a wind barrier, which would check the velocity of the wind, trap the snow of winter on the fields where it would be needed the following summer, check the soil loss from blowing, perhaps reduce the evaporation of moisture from the soil and from the growing crops, and, last but by no means least among his hopes, add something of beauty to the countryside and enticement to the birds.

By 1935, the federal government had established the Prairie Farm Rehabilitation Administration, and a field shelterbelt association was established in the Conquest area. Others were got under way at Aneroid, Saskatchewan, at Lyleton in Manitoba, and on a smaller scale at Porter Lake, Alberta. Now, in these areas, hundreds of miles of field shelterbelt plantings have been made, running across what formerly were large, and completely exposed, crop areas, in straight lines 30 to 40 rods apart. Many of the hedges planted are single rows of caragana, running north and south, now eight to ten feet high. Some are three-row shelterbelts, now in excess of 25 feet in height, and consisting of rows of caragana, ash and maple.

GIVEN careful previous preparation of the soil, the selection of suitable shelterbelt material and good care subsequent to planting, the benefits of field shelterbelts can only come with density and



[Guide photos]

An increasingly familiar sight today. Prairie farmers may plant nine million trees this year for shelter.

height. Indeed, the ability of a shelterbelt to check wind velocity is directly in proportion to its height, and density. For example, a single-row shelterbelt, seven feet high, would permit the wind to retain 60 per cent of its full velocity at a distance only 70 feet from the shelterbelt. If the shelterbelt were 20 feet tall and contained three rows, however, similar protection would be afforded 200 feet away. Officials at the Soil Research Laboratory, Swift Current, Saskatchewan, say that "20 times the height of the trees is a good average distance of influence for cross winds, blowing at angles within 45 degrees of the perpendicular."

It is only within the last two or three years that much information has (Please turn to page 63)



The usefulness of the shelterbelt in holding snow on the soil is clearly illustrated here.

Wings Over the Wheatland



Weeds can be controlled from the air on thousands of acres of grain crops in a relatively short time



by J. H. JUNK



The position of this plane, so close to the ground, illustrates the reason that crop spraying is a very dangerous job for the inexperienced airman.

ONE morning in the summer of 1948, the wheat farming Bladon Brothers watched with awe and some doubt, as the airplane droned back and forth just two feet above their mustard-infected fields south of Regina. They couldn't quite see how that fine spray from the plane would kill all those weeds. However, the boys of the newly formed Prairie Flying Service were confident that they could speedily turn the weedy crop into a heavy yielding one.

The Prairie Flying Service was founded through the efforts of dynamic little Paddy Watson and three of his ex-Air Force buddies, Bob McKnight, Art Davis and John Howe. The company was formed to provide an airborne weed eradicating service to farmers. Paddy Watson thoroughly studied the new weed killing chemical 2,4-D; then he and the three pilots worked out a method for aerial spraying of crops. They were pioneers in this airborne war on weeds and they started right from scratch.

In the beginning their only asset was experience. They had gained it in the Air Force, where all three of them turned into crack pilots. They gathered more valuable know-how when they joined the Meteorological Service as Weather Observers. Here they learned to easily recognize weather conditions suitable to crop spraying. This background gave them a good start into the crop spraying business.

However, experience was not enough—they needed equipment. To get it they pooled all their resources and

managed to buy a Piper Cub aircraft and a battered old 1930 International truck. John Howe fitted the Cub with improved spraying apparatus, while the other fellows rigged the truck to carry a large tank for chemicals. With this equipment they successfully sprayed some 6,000 acres in the first season. In the next season they added another aircraft and a panel truck. In succeeding years their line of equipment grew, until eventually they leased a large hangar at the Regina Airport and operated four fully equipped spraying units.

They found the most efficient spraying unit to consist of one plane and one power-take-off-equipped tank truck. The unit is manned by a pilot, two flagmen and a salesman.

The unit goes into action after the business deal is complete and the farmer has pointed out the field to be sprayed. As the plane gets into the air, the flagmen go to positions at either end of the field. In the air, the pilot circles, lines up with the two flagmen and does his first low sweep, spraying a 60-foot swath. As he crosses the borderline of the field, he cuts the spray and does a turn. In the meantime, the flagmen pace off the distance to their new positions and all is ready for the next sweep. In this fashion the operation moves along until the whole field has been covered.

CROP spraying is one of the most dangerous jobs in aviation. It takes highly skilled pilots to properly handle the spray planes. The pilots of Prairie Flying Service are skilled and

careful. They have never had an injury and they have had only four small accidents in all the years they have been flying. This fine safety record is due to good airmanship, the use of top-shape aircraft and the practise of safety rules at all times. One safety rule is the daily inspection of their aircraft to make sure that everything is in airworthy condition. In addition, the pilots use special safety equipment, which includes crash helmets and shoulder harness. They find that safety measures pay off in the aerial crop spraying business.

The crop spraying season is short. They begin operations about the third week after seeding and continue for about four weeks. In those four weeks their planes cover 55,000 acres, raining death to weeds and improving the grain yield on every acre.

According to Paddy Watson, yield increase depends a great deal on the timing of spray operations. Best results are obtained if spraying is carried out on wheat and barley crops, when they have reached the three-leaf stage or a height of five to six inches. Oats should be sprayed after about the fourth week of growth. He says flax may be treated as soon as weed growth warrants, providing the flax plants have already formed four or five leaves. By killing weeds early, farmers give the crop a chance to use the moisture that would otherwise go to the weeds.

The weed killing spray used is a special fast acting mixture known as "Air-Mix." Results begin to appear just

24 hours after the Air-Mix has been applied. It consists of 2,4-D in light grade oil. The light oil distributes the 2,4-D and helps it to quickly cut through the waxy film on the leaves, avoiding any loss of killing power through evaporation, or washing by rainfall. The oil breaks up into fine particles and comes out as a rolling mist covering the top and underside of the weed leaves. This mixture is applied at the very low rate of 2.3 quarts per acre, ensuring against oil damage to the crop.

THESE planes carry out other types of spraying as well. For instance, in the 'hopper year of 1950 they covered several thousand acres with grasshopper poison. In 1953, the City of Winnipeg called on them to spray 5,000 acres of water-soaked, mosquito-breeding land. These jobs were attended to as efficiently and effectively as weed spraying operations.

Their careful spraying technique is earning a good reputation. They have received very few complaints of damaged gardens. In the few cases reported, the fault usually lay with the owners, who failed to indicate garden locations to the pilot.

There are several advantages to aerial crop spraying, as compared with ground spraying. The first is speed. A large acreage can be treated in a short time, and at the right time. It doesn't matter to an airplane that the ground is too wet, or the grain too tall: spraying can be done when weed growth calls for it. Another advantage is the elimination of all wheel damage to the grain. In addition, the farmer can devote his time to other jobs, while the spraying is going on. He doesn't have to buy expensive equipment either. With these advantages, it's little wonder that farmers are calling on Prairie Flying Service, especially when they consider the cost, which is reasonable and comparable with other methods.

Farmers like the Bladon Brothers have found that aerial crop spraying is practical. As the weeds die and the grain begins to thrive, they can see how the added bushels per acre will more than pay for the spraying. They are glad that the spray planes came to wing in over their fields.



Eliminating the visitors, the crop spraying unit consists of a plane, tank-truck, pilot, two flagmen, and the truck-driver.



Wheat is harvested in March with the sickle in Pakistan. An attempt is being made to substitute the cradle method.

Search for Chopattis

TO many of us in the West, the word "Punjab" conjours up a land of Mogul Emperors, of tiger hunts and of British regiments playing polo. It ranks with the Khyber Pass, the forbidden city of Lhasa, or Bagdad, in symbolizing the romance of the East.

But I saw none of these. The last of the Moguls ruled over 100 years ago, and the descendants of their provincial princes dress as we do. They ride, not on elephants, but in sleek custom-built automobiles. The only tigers I saw were in the zoo at Lahore, the principal city of West Punjab, and jackals were the largest "wild" beasts encountered. Polo is still being played—in fact, this is where it is said to have originated—but now it is played by Punjabi cavalymen in flowing white lungis.

Instead, I saw the Punjab as a vast, level plain inhabited by 20 million people, over 80 per cent of whom are directly dependent on the soil for a livelihood. It is a plain criss-crossed by a vast network of modern irrigation canals, interspersed with thousands of ancient Persian water wheels. A plain rutted with innumerable bullock cart trails leading from paved trunk highways; and dotted with thousands of mud-walled villages, whose cities have modern airports. Truly a land of camel cart and Cadillac, of old and new. But I didn't find what I saw unromantic.

The Punjab in old, undivided India stretched from the Indus River in the West, to New Delhi in the east. Partition in 1947 divided it in half, the west half going to Pakistan and the east half to India. This story is concerned with the west Punjab, the bread-basket of West Pakistan. It grows wheat, rice, sugar cane, fruit and vegetables, as well as large quantities of cotton. In good years it produces sufficient to satisfy minimum food requirements, with possibly some left over for export. A series of bad years means poverty for its millions, since the lack of storage and refrigeration, coupled with a hot climate, means little or no carryover.

The Punjab is semi-tropical. The mean summer temperature (April to September) is about 85° F., with highs of up to 120° F. The mean winter temperature (October to March) is about 60° F., slightly warmer than the mean summer temperature on our Canadian Prairies. It is on the edge of the Monsoon belt. The Monsoons come in late June and last until early September, bringing about 12 to 14 inches of rain. With the exception of two to four inches of rain in December and January, the remainder of the months are dry. The combination of low rainfall and high temperature means an arid climate, and the necessity for irrigation.

The Punjab, bread-basket of West Pakistan, is being rapidly rendered sterile by alkali. What is being done about it is told here by

EARL BOWSER

Photographs by the author



The rice harvest is usually dried on an earthen floor, and when it is ready, is bagged for shipment.

The people of the West Punjab are of Aryan stock. They belong to the white race, and are Muslims or Islamese. They are friendly and industrious, and look back on a long and, at times, glorious past. Of late, however, they have fallen behind in technological progress.

THE word "Punjab" means five rivers—the Sutlaee, Beas, Ravi, Chenab and Jehlum. All are tributaries of the Indus River, and all rise in the Himalaya Mountains to the north. Actually the Punjab plain is a huge delta built from silt eroded off the mountains by these rivers. This silty deposit is now about 3,000 feet deep. Over this the rivers meander in beds so shallow that during flood periods they overflow their banks by many miles, and in so doing cut themselves new channels. Although such terrific erosion in the hills means bare, denuded slopes, devoid even of goat pasture, it has its compensation. That annual load of fresh silt is rich in mineral plant food and this is why, after thousands of years of cultivation, the soils of the Punjab are relatively fertile.

The Punjab plain is level. No natural hills break the view from horizon to horizon. A few man-made

"hills" do exist, but these are centuries-old village sites. Each monsoon rain washes some of the mud off the walls and each fall fresh mud is carried in to repair the damage—a chore that usually goes to the village women. In some cases these village mounds are 20 feet high.

All the rural population,—the cultivators and their families—, live in these villages. Their day starts two hours before sunrise, when they offer their first prayer to Allah, and the last prayer of the day is two hours after sunset. Breakfast, as other meals, consists mainly of chopattis, or unleavened pancakes. After breakfast the cultivator goes to his fields, and with him usually go his sons. With the menfolk away, the women start their daily round of chores. There may be some fresh mud plaster needed for a redecorating job; the family washing may have to be pounded out on a flat rock beside an irrigation ditch; there may be grass mats to weave, or cotton to spin; but certainly fuel must be gathered for the cooking hearth. Wood is a very scarce commodity, and fuel consists of twigs, grass roots, and bits of straw (Please turn to page 32)

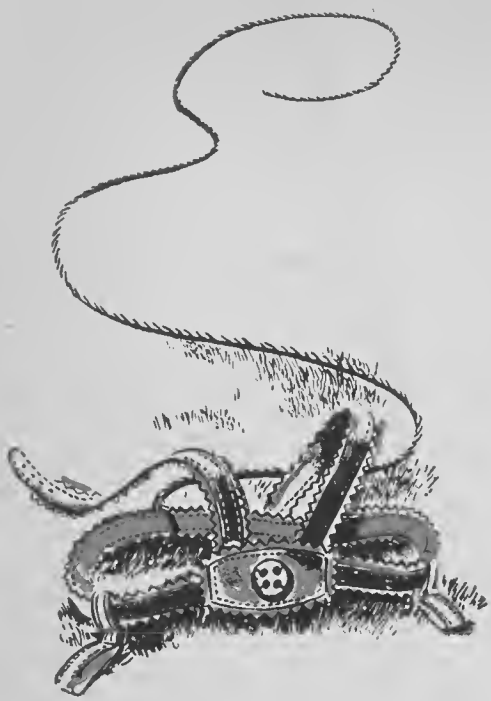
The author (down the hole) examines a soil profile with students, who are university graduates.



Summer Storm

by AUDREY McKIM

There was something tense and fearful in the steady closing in of heat on that June day, in the motionless air and menacing clouds. There was tension too, in the minds and words of three people.



ON Saturday Lexy was awakened by the Neilson baby's fretful cry. Another stifling day! She tried to push her bedroom window higher, but the fetid air of the farmyard under the burning sun was as hot as the smell of woodfire seeping into her room from the kitchen below.

Lexy sighed with discomfort and exasperation. After a restless night the day stretched ahead with only one redeeming feature about it. Although the problems of her twenty-one school children were still with her, she need not keep the classes in order today.

The unbroken heat of the past two weeks had seemed to intensify her personal problems, and some of the irritations at the school had become almost unbearable. The most obvious were the unwashed but happy Kellys. Mrs. Kelly loved her family deeply, but a more casual acceptance of her duties regarding their personal appearance, Lexy could not imagine. A hostile note from Mrs. Kelly, resenting criticism, had arrived yesterday with young Basil Kelly. Its contents were still working like a canker into Lexy's soul. Surely the woman realized that she, the teacher, had an interest in the welfare of the children, and had a right to show concern.

A year of teaching was about to end. Crowded into the next few days were bundles of test papers to be marked, June forms to be made out in duplicate. The nagging thought that possibly she had done less than her best with the children. All this against the disordered backdrop of an uneasy world! If only she could step back into the adolescent world which she had so recently left and indulge in a release from responsibility.

"Enough of that!" she told herself as she tied her bright hair high up from the nape of her neck. "Just one day at a time! Let me get through this Saturday with all my papers marked and forms done, and I'll try to be satisfied."

She made a half-hearted attempt to put on a pleasant expression as she went downstairs and into the kitchen. The baby Karl, clad only in a dry diaper, banged a mug and spoon on the tray of his high chair. Infinitesimal beads of perspiration showed on his upper lip and around the edges of his soft blond hair. When Lexy appeared he turned on the charm. His lower teeth pushed forward and he wrinkled his nose. Up went his arms.

"Oh darling," said Lexy, "I'll only make you hotter if I pick you up." She took the tiny hairbrush from the windowsill and began to brush his hair up and away from his neck and forehead. "You like that, now don't you?"

The baby rolled his blue eyes at his parents who were sitting close together, at the kitchen table. They smiled at him. He relaxed and gave himself up to the gentle and cooling effect of Lexy's administration.

Karl Neilson was wearing grey slacks and white T-shirt instead of the usual overalls and dark shirt. "Going

to be another scorcher today, school mum," he said.

Lexy made a face of agreement and resignation. She tried to keep down the feeling of irritation. Did he have to use that awful name every time he addressed her?

"You look lovely and cool," said Anna. "I should take the neck and sleeves out of one of my house dresses and make a sun dress like that—if I had the time."

"Doc wanted to know how you were, school mum," grinned Karl. "Used a lot of forty-five cent words askin' the question too."

"What did he say?" Lexy tried to appear not too interested but she didn't fool Karl.

"Well now, I really got to think that one over. 'How's the—how's the impetus—impetuous and dессicated'—that don't sound right. I got it! 'How's the impetuous and dedicated young Miss O'Conner? How's she gettin' along with her reformin' the district.' Somethin' like that. You know the way Doc talks."

"Karl!" protested Anna, trying to hide her amusement.

(Please turn to page 44)



"Karl, the baby's lost!" The desperate cry and anguish in Anna's face brought him down from his horse. He caught her as she flung herself at him.

Illustrated by Neil Hoogstraten.

Silos Can Be Simple



Silage can be removed by the drag method, using hay-fork rope threaded through two or more 2' x 6' boards.



A simple, temporary silo is made with walls of baled hay or straw reinforced with steel snow-fence posts.



Cattle at self-feeding gate in horizontal silo. Gates can be protected against frost and snow when not required.

AN advantage of the horizontal silo is its simplicity. It does not require a skilled engineer to put up the two retaining walls, and it need not cost a lot of money. The walls are made usually of lumber, strengthened with posts set in concrete. Because the silage must be packed tightly, heavy posts are needed, but the walls themselves can be of two-inch planking or plywood, and should be about six feet high. Concrete may be used for the floor, but gravel will do.

Loading and unloading are simple operations, and need no special equipment. A self-feeder, made of two-by-six lumber, will cut down the chores in winter.

For a temporary silo, all that is needed is some baled hay, reinforced with steel snow-fence posts.

To avoid spoilage, spray water periodically on the silage, while the silo is being filled, and pack the silage down tightly with a tractor. A tarpaulin, suspended from a pole, will protect the silage in winter.

(Photographs by Experimental Farms Service, Canada Dept. of Agriculture.)



An experiment with sulphur dioxide gas, applied as silage conditioner at five pounds per ton of forage.



Horses can be used when packing unchopped grass silage into a horizontal silo, as in this picture taken at the farm of H. H. Hannam, east of Ottawa.



Chopped forage in a horizontal silo before covering with straw, shavings or hay. The left wall is 2' x 6' lumber, and the other is 3/4' fir plywood.



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Under the Peace Tower

by HUGH BOYD

IF a club is ever formed for distinguished foreigners who have trod on the sensitive toes of Canadians, two of the chartered members would undoubtedly be Mr. Douglas Stuart, recent United States ambassador to this country, and the Earl of Home, the British secretary of state for Commonwealth relations. Both have recently made remarks about Canada's commercial dealings with the United States, that, to some degree or other, have put them in the doghouse.

Mr. Stuart had lived among Canadians long enough to suppose he could talk with a certain frankness on the subject of American investment. But he misjudged the situation somewhat, and so his leavetaking was attended by a certain coolness on the part of many of his hosts.

The Earl of Home had no such prior advantage. Fresh off the boat at Halifax, he found himself caught in a press conference, in the course of which he answered a question thus: "Canada should not fear United States domination through an influx of U.S. development capital. There is so much to be done that I should think there is room for all who have money."

Back in his own country, the British minister's remark aroused fury in the office of an important London newspaper, which demanded his immediate recall and dismissal on the grounds that (a) he should be promoting British investments rather than excusing those of an arch competitor, and (b) that he was guilty of a flagrant intrusion into Canadian domestic affairs.

On this side, some people felt the same way on the second score. Mr. M. J. Coldwell, the C.C.F. leader, enquired in the Commons whether Lord Home's remark might not be construed as "an intrusion into Canadian domestic discussion."

An explanation was duly forthcoming from the Earl of Home, who said he was, naturally, interested in the export of British capital to Canada. Indeed, he pointed out that last year Britain had put into Canadian industrial enterprises perhaps a third of its total overseas investment. For the rest, he intimated that it was entirely up to Canadians to settle from what sources they drew their supplies of foreign capital.

This incident, unimportant perhaps in itself, has aroused attention here in Ottawa, because it points up the nervous attitude of a great many Canadians on the subject of control of their own affairs.

IT came at a time when the House of Commons was embroiled in a fight over the building of a natural gas pipeline from Alberta to Ontario and adjacent Quebec. This resolved itself into the issue of American participation in Canadian development. The government is firmly committed to a scheme, under which a predominately American company is to have most of its enterprise underwritten by the Canadian government. In view of all the recent talk about American domination of this country, the de-



velopment naturally generated plenty of heat in the Commons.

The result has been a multiple application of the rarely used closure device in Parliament. In taking this drastic course, the government gambles that by next year, when it expects to present its record to the electorate, the pipeline issue will be ancient history. It hopes that the prairie leg of the pipeline will already have been built, and that Trans-Canada will have picked up the necessary money to repay the government's loan.

One significant point about the pipeline affair is the enthusiasm with which the Liberal rank and file has backed the government. After all, the majority has rights as well as the minority, and no government can tolerate obstruction, if a major policy is to be carried out on schedule.

A year ago, the government, faced with a sprightly filibuster by the Conservatives over extension of the defence production emergency powers, hesitated to bring out the gag, because a fundamental question of the supremacy of Parliament was involved. The cabinet knew it, and so did the back-benchers. Even had the government stubbornly persisted in its course, there is room for doubt whether it could have kept all its followers in line.

THIS time the situation has been quite different. The cabinet took quite a while to make up its mind on how to overcome the roadblock to a start on the pipeline that was erected by the U.S. Federal Power Commission hearings at Washington. Once it did, however, it sold the plan to the Liberal caucus in short order. There have been no signs of defections, or of sullen acquiescence, even among members from parts of the country not in the path of the pipeline, some of whom may have had uneasy feelings that if gas doesn't prove competitive with other fuels, they are going to have to help pay for a subsidy.

Mr. Harris made out a good case for the project, when he spoke of the stimulus to other industries, of the increased markets for Canadian farm products at home, and so on. But what has probably helped convince a number of Liberals is the prospect of other big national developments—including the South Saskatchewan dam and a big power scheme in the Maritimes. V

GET IT AT A GLANCE

Farm News
At Home and Abroad

Prairie wheat acreage, estimated at just under 20 million acres this year, will probably be the lowest since 1943, and 5.8 per cent less than last year. Increases in barley and flax are expected to replace most of the loss in wheat acreage. ✓

The World Plowing Contest is being held at Oxford, England, in October this year. About 23 countries, including two competitors from Canada, will be vying for the Golden Plow award. The 1957 contest will be in West Germany. ✓

Apple blossom pollen was exported from Penticton, B.C., this spring to Washington state, where cold weather had damaged much of the blossom. The blossom was refrigerated and sent by truck to be applied to Washington orchards from aircraft. ✓

Farm co-operatives are being strengthened in Britain by the amalgamation of the Agricultural Co-operative Association and the Farmers' Central Organization, which is sponsored by the National Farmers' Union. ✓

Central Alberta farmers have rejected a hail suppression scheme for the municipalities of Mountainview and Kneehill. The experiment, which would have been the first in Canada, was estimated to cost \$163,000 this summer. ✓

Wool consumption throughout the world rose to 2,580 million pounds in 1955, according to the Commonwealth Economic Committee. The biggest increases were in Canada, the United States, West Germany, and Japan. ✓

Ontario water distribution and sewage disposal is to be controlled by a new Ontario Water Resources Commission, which has the power to purchase, lease or expropriate land for schemes estimated to cost 2.4 billion in the next 20 years. ✓

"Operation Roadblock" was the name given to a demonstration by French farmers demanding government aid. Thousands of roadblocks were thrown up on highways, and farmers distributed leaflets to trapped motorists. ✓

Churchill's terminal elevator, which has a capacity of five million bushels, may be enlarged to hold 50 per cent more by next year. There is an increasing demand from Europe for grain shipped through Churchill. ✓

Red Chinese peasants, 90 per cent of whom have been forced into collective farms in the past 12 months, are reported to be dissatisfied with the poor prices they are receiving, and are selling their work animals for food. ✓

Manitoba dairy farmers earned an average of \$497 last year, according to a study made on 59 farms. Earnings varied from \$7,312 to a loss of \$6,027. Only 12 earned more than \$2,000, and 21 showed losses. ✓

Wild elephants in Ceylon are being killed at the rate of 50 a year by vil-



W. J. White becomes Professor of Field Husbandry, University of Saskatchewan, succeeding Dr. J. B. Harrington.

lagers defending their crops, as new areas are cleared for farming. The government is trying to persuade farmers to drive the elephants away instead of shooting them, in case they should become extinct. ✓

United Co-operatives of Ontario opened a new \$600,000 feed plant in Guelph last month. It is expected to produce 400 tons of feed a day eventually, and will supply 72 co-operatives in central and western Ontario. ✓

U.S. egg production, reported to be 195 eggs per hen per year now, compared with 188 in 1955, is said to be stimulated by greater use of hybrid hens, which are believed to lay 22 per cent more eggs than non-hybrids in some cases. ✓

Canadian Credit Unions totalled 3,961, with 1.5 million members, at the end of 1954, which is the latest year for which figures have been released. Total assets were \$550 million, or \$63 million more than in 1953. ✓

Australian zebu, a type of hump-backed ox, are being crossed with cattle and are said to outweigh European cattle of the same age by 150 pounds dressed weight. The cross is improving cattle in tropical areas, but is not suitable for temperate zones. ✓

Prairie poultry groups have set up an interprovincial committee to coordinate educational and market promotion programs in the three provinces. It is supported by the prairie Federations of Agriculture and Farmers' Unions. ✓

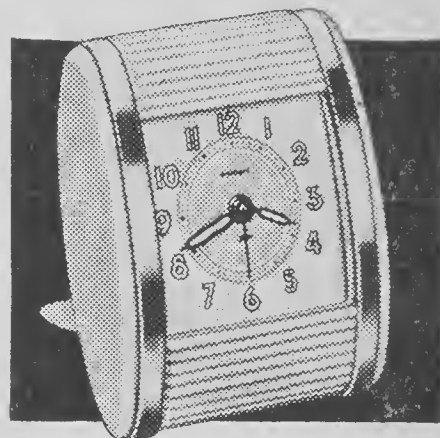
Grasshopper control costs are being shared equally by the Manitoba government and municipalities this year. Worst areas are expected to be south of Neepawa and Gladstone to the Assiniboine, the Carman area, and east of the Red River around Dominion City. ✓

Soybean prices increased recently to 15 cents a pound in the United States. This is expected to be the top price for this season. U.S. prices, which largely determine the Canadian price, are strong because there is no surplus at present. ✓

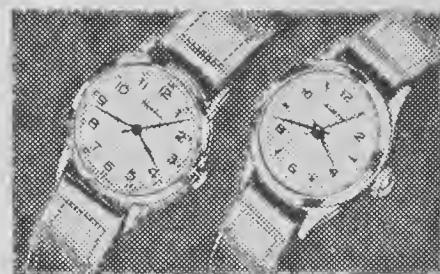
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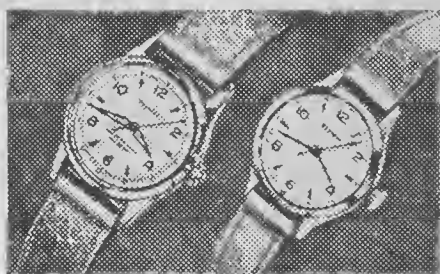
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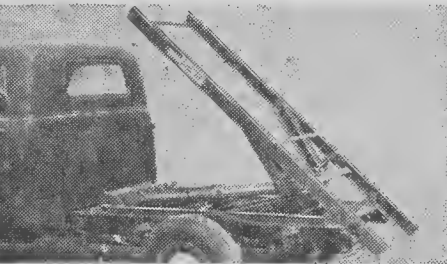
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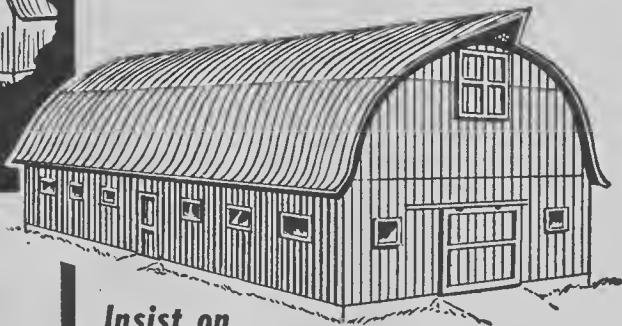
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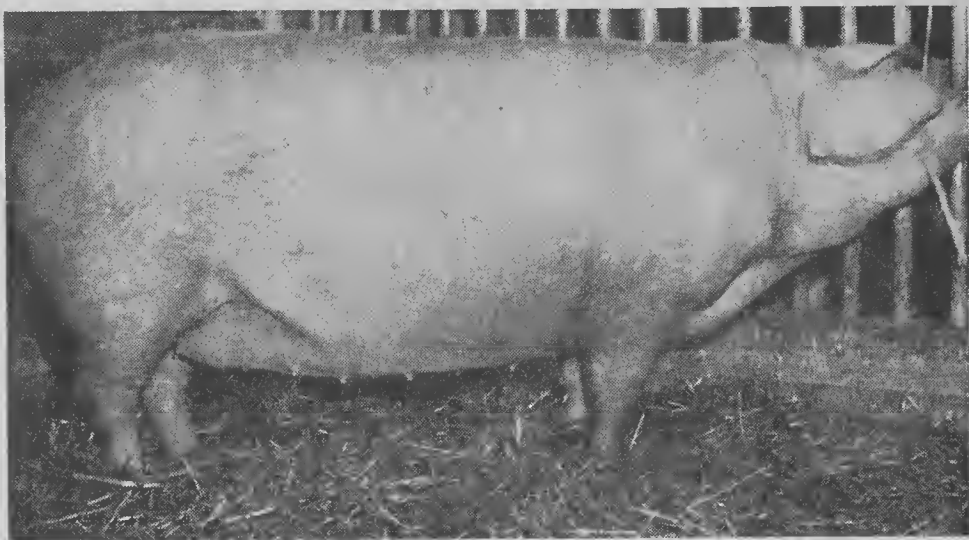
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LIVESTOCK



Coval Ingrid, one of the Landrace sows imported recently from outstanding breeders in Great Britain by Jack Tweedle and Harry Cassie, of Fergus, Ontario.

Ancestry In Hog Breeding

SELLECT better breeding stock for hog carcass improvement, says the Ontario Department of Agriculture. Improvements can be made in rate of growth, feed efficiency, carcass length, uniformity of back fat and leanness of carcass by careful selection. These characteristics can be inherited sufficiently to justify the claim that foundation gilts and boars should be selected on the performance of their ancestors, as well as on their individual merit.

If gradings are satisfactory—at least 60 per cent of all carcasses between 140 and 170 pounds grading A—replacement gilts can be selected from the best litters. In choosing the best, consider the size of the litter, the temperament and nursing ability of the sow, the rate of growth and feed consumption. Breeding boars, and breeding gilts if possible, should be selected from herds and litters with good Advanced Registry backing.

Give Pastures A Chance to Grow

WHEN animals are given access to an entire pasture for the whole season, they tend to avoid the tall grass and to graze the shorter and more succulent grass. The depressing effect that this has on grass yields has been shown by a test at the Lethbridge Experimental Farm, Alberta, where some grasses were clipped back to one and one-half inches each time they reached a height of four inches, and others were clipped to three inches whenever they reached ten inches.

The short clipping, which was equivalent to continuous close grazing for five months, cut the yield to one-third of the grass which was clipped to three inches. The taller grasses had strong and extensive root systems, and were able to withstand adverse conditions and weed encroachments. The short clipping made weak plants with poor root systems.

Rotational grazing, where animals are allowed to graze a small area for a short time, and are then moved to fresh pasture, is the better method. Once an area has been grazed, it can be mowed, harrowed and fertilized,

and then irrigated and left to recover. With a rotation of four fields, one week is allowed for grazing, and three for irrigation and regrowth. Harvest excessive growth for hay or silage.

Dairymen's \$70 Million Guests

A SURVEY of the annual loss due to livestock pests in Canada, recently completed by Dr. A. W. A. Brown, University of Western Ontario, puts the total at \$100 million, about 70 per cent of this due to cattle pests.

During the fly time, horn flies can cut milk production as much as ten to 20 per cent, and heel flies cause such annoyance when they are laying eggs that milk flow suffers. Black flies have killed many valuable cattle in some areas, and during the winter, warbles and lice may cause unthriftiness and disease in dairy herds. Considerable sums are spent each year to control household pests, such as house flies in dairy processing plants, and additional costs are incurred in preventing losses through cheese mites, cheese skippers and other pests in storage rooms.

The insect problem in the dairy industry will be one of the subjects to be discussed at the World Congress of Entomology in Montreal next August.

U.S. Farmers Praise Molasses

MAKING a "spot-check" among 181 farmers using molasses, the Agricultural Marketing Service of the United States Department of Agriculture came to the conclusion that molasses plays an important role in addition to its value as a carbohydrate feed.

Among the points in its favor, according to some of the farmers questioned, was that when mixed with dry feeds it settled the dust, bound the fine particles together, and prevented sifting or blowing of the feed. There was also less coughing by animals while feeding.

Another advantage reported was that the odor of molasses attracted animals, which have a "sweet tooth," and they would consequently eat less palatable feeds mixed with it. It aided

LIVESTOCK

digestion by increasing the vigor of the micro-organisms in the rumen, and so they did a more efficient job in breaking down the tough parts of roughage feeds, such as corn cobs and cereal straw, into digestible nutrients.

A large portion of farmers saw an improvement in the coat and general appearance of livestock, when they were fed molasses, and wool from sheep was said to have better curl and brought a better grade, if properly cleaned before shearing. Sheep raisers advised, however, that sheep should be taken off molasses, particularly if fed in liquid form, at least three weeks before shearing.

A group of open range cattle feeders thought that molasses saved time, feed and labor. Twine-tied bales, soaked with one or two gallons of undiluted molasses could be left, still bound, at range feeding points, and even when the binding was loosened, it would still hold together, in spite of wind, and more of the feed was eaten. It was possible to feed every other day by this method, instead of daily.

The disadvantages of molasses are that it is sticky and heavy to handle, it can produce scours if fed too freely at first, it attracts flies and other insects, and when diluted in water, it is highly perishable. V

Grading Finds

Best Milk Producers

TO stand the strain of heavy year-to-year milk production, a cow must have a correct body conformation or type. This conclusion was reached after a study of the top group of Holstein lifetime producers in Canada. Two hundred and twenty Holsteins have produced more than 150,000 pounds of milk in their lifetimes, and all but seven of them have been officially classified for type. Ninety-seven per cent have graded Excellent, Very Good or Good Plus, and the remaining three per cent were Good.

Professor G. E. Raithby, Ontario Agricultural College, Guelph, says this is clear proof that the Selective Registration system of type classification is soundly based, since it is recognizing and putting in the top classes those animals which are capable of heavy, sustained lifetime production.

To the average dairyman, he says, this means that one of the surest means of improving the production of his herd is to have it regularly graded for type. The probability that animals in the lower classes will not be as profitable as those in the higher classes can be kept in mind when the herd is being culled. The increased sale value of the higher grading animals is also an important consideration.

The study also showed that of the 19 cows producing over 200,000 pounds, none was graded lower than Good Plus, and 63 per cent were either Excellent or Very Good.

A similar study made by the Holstein-Friesian Association of America, confirms the Canadian findings. Ninety per cent of the Holstein cows in the U.S., with official lifetime records exceeding 150,000 pounds of milk, are classified Good Plus or better. V



How Hector Burton, Bethany, Manitoba Conserves Soil, Water, Manpower, Money

A pair of CAT* Diesel Tractors makes practical a complete conservation program on Hector Burton's 1200-acre farm!

Here's an example of soil and water savings: Up on the sidehills where wind erosion strips off the sandy clay loam, he stubble-mulches with a oneway, killing weeds and leaving a trash cover to hold soil and water.

His Cat D6 Tractor pulls big hitches enabling one man to do the work of several. For example, he stubble-mulches with a 26' hitch of 28" oneways to cover 10 acres an hour, or cultivates with 30' of spring tooth harrow—72 teeth—cultivating 16 acres per hour.

His Cat Diesel Tractors save *and earn* him money on every job, too. He disk plows for 7.6¢ per acre, fuel cost, and cultivates for 4.3¢ per acre. He earns extra money by doing custom farm work and land clearing with his tractors. The

long life and low upkeep of his tractors net him a big savings, too—his D7 has worked for more than 9000 meter hours and at last report the engine had never been overhauled nor had any maintenance problems.

It's easy to see why Mr. Burton is a satisfied Caterpillar Farm Tractor owner! He says, "Since my first experience with Cat track-type Tractors in 1938, I have been well pleased, not only with the very low operating and maintenance costs, but with overall performance. We have owned 8 Cat track-type Tractors, and over the years have saved many hundreds of dollars in fuel costs, alone!"

Does Mr. Burton's message give you a clue on how *you* can save soil, water, manpower and money on *your* farm? See your Caterpillar Dealer for full information!

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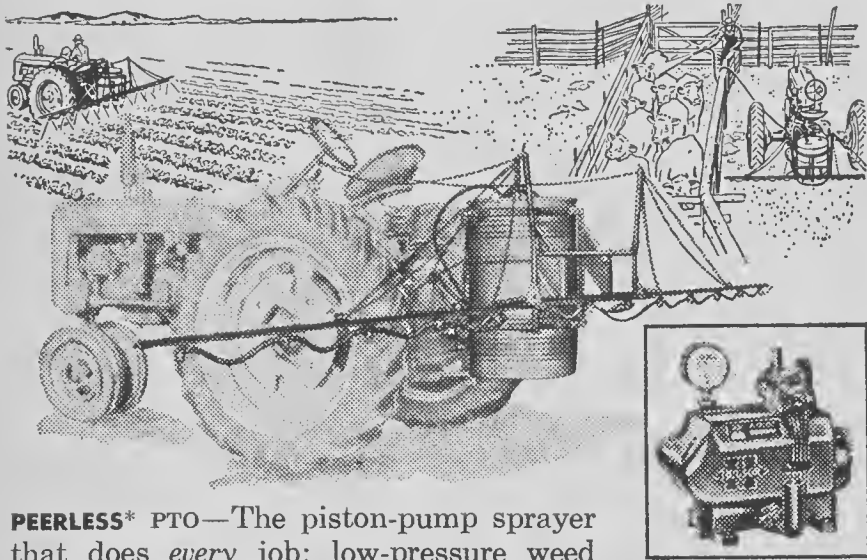


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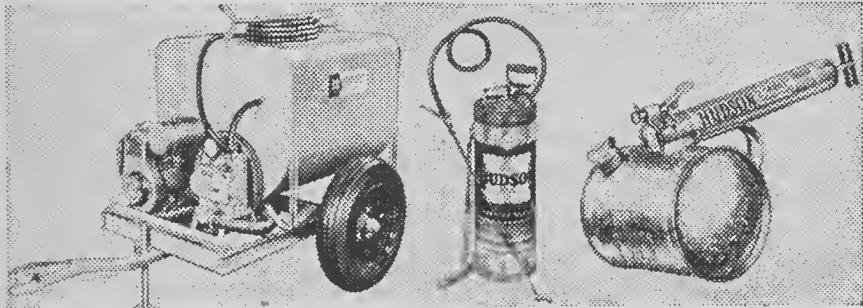
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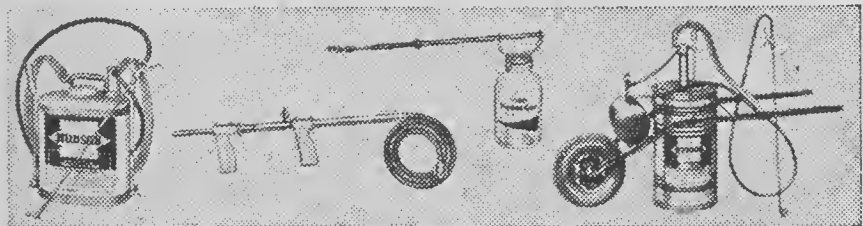
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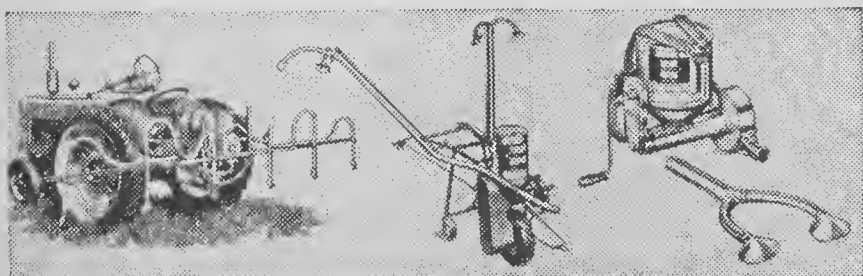
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FIELD



[G. Grassick photo]

Irrigated pastures can pay dividends in higher output of meat, milk and poultry. Irrigation is also a valuable aid to forage crops, especially as seedlings.

Pasture

Irrigation Paid

H. F. FLETCHER, of the Agassiz Experimental Farm, B.C., has found from tests on the Ladner plots that pasture irrigation is profitable in the Fraser delta area. An orchard grass-ladino mixture was sown on June 2, fertilized with 400 pounds of 10-20-10 fertilizer per acre at seeding, given supplementary fertilizer at the rate of 200 pounds of sulphate of ammonia per acre just before irrigation, and irrigated with 3.43 inches of water on July 22, August 29 and September 9. Weeds were controlled by clipping.

The total yield from two cuttings on September 6 and October 14 was 1.10 tons of dry matter from irrigated plots, and only 0.35 ton from check plots which were not watered. Assuming the value of pasture to be equivalent to that of hay, which averages about \$27 a ton, irrigation gave a gross return of \$23.40 per acre (0.90 ton hay weight) on only two cuttings in the seeding year. At least four cuts could be had with irrigation in that area in most years.

Cut Early

For Better Forage

FOR the best yields of protein and carbohydrate, cut grass and legumes for hay just as they begin to flower. It was found in tests at the Swift Current Experimental Farm, Sask., that digestible nutrients in forage crops decrease after June, and that they are more palatable when harvested early.

On farms with few livestock, loose hay is quite satisfactory, but baling is better with many livestock to feed.

Vernal and Ranger alfalfa, whether for hay or silage, can stand earlier and more frequent cutting than the older varieties, such as Grimm and Ladak, according to the Agricultural Experiment Station, University of Wisconsin. Both Vernal and Ranger are hardy and wilt-resistant, and three cuttings a season are not too much for them, starting in late June. The second cutting should be in August, and the third in October. In some cases, the growth may be vigorous enough to permit three cuttings by early September.

Hay and protein yields of Vernal and Ranger were found to be about

the same in Wisconsin under the three-cutting system, but Vernal out-yielded Ranger with only two cuts, because the latter is more susceptible to leaf diseases.

Renewing Old Pastures

FERTILIZERS have made old, natural pastures up to four times as productive in Quebec. Dr. J. L. Dionne, of the Lennoxville Experimental Farm, has compared nitrogen, phosphorus and potash, applied singly and in mixtures, and with and without lime, on Magog stony loam, Ascot sandy loam and Greensboro loam. The basic formula was 1,000 pounds of 2-12-6.

On Greensboro loam, the annual application of this formula for three years gave an average yield of 3,258 pounds dry matter a year per acre, while only 795 pounds were obtained without fertilizer. The same treatment for Ascot and Magog soils over eight years produced annual averages of 4,278 and 2,725 pounds, compared with 1,830 and 1,413 pounds of dry matter respectively from the unfertilized plots.

When 1,000 pounds of 2-12-6 were applied every three years, the annual production of pasture as dry matter was: Greensboro 1,583, Magog 1,420, and Ascot 1,210 pounds.

Phosphorus increased yields by an average of 468 pounds on the three types of soil. Nitrogen increased yields by 390 pounds on Magog and Ascot, and by 34 pounds on Greensboro. Potassium increased yields by 258 pounds on Ascot and Greensboro, but was unprofitable on Magog. Lime was effective on Magog and Ascot.

Ready-Made

Meals for Cutworms

BECAUSE pale western cutworms produce few enzymes, which help living creatures to break down food and assimilate it, they rely on plants to do the job for them. That is why the sap of a plant is more important than plant tissues to the cutworm.

The pale western cutworm is unable to absorb the more complex proteins, according to Dr. Brian Hocking, Professor of Entomology at the University

of Alberta, but it can find most of the nitrogen it needs in a simple form. These nitrogen supplies are available most abundantly at the base of the seedling shoots, where they are being moved from reserves in the kernel to the growing parts of the young plant. In this flowing sap, the cutworms find their food well prepared and can get it without much effort — while the farmer pays the bill. V

Nitrogen Reduced Clover

THE percentages of clover and grass in pasture depend to a great extent on whether fertilizer is used, according to tests made at the Saanichton Experimental Farm, B.C. An unfertilized, irrigated pasture sod was seeded to 12 pounds per acre of orchard grass, 12 pounds of perennial rye, and two pounds of Ladino clover. It yielded 8,384 pounds of dry matter and 2,100 pounds of protein per acre last year, carrying 71 per cent Ladino clover and only 29 per cent grass.

When the same mixture was fertilized with nitrogen, using three applications of 60 pounds each during the growing season, the yield of dry matter was increased to 9,320 pounds per acre, but the protein yield was much the same as before. However, the fertilized sod carried only 48 per cent Ladino clover, and 52 per cent grass. The nitrogen fertilizer had increased the grass content at the expense of the clover and kept the protein level down.

It is probable that the reduction in clover, after nitrogen was applied, reduced the danger of bloat in cattle on the fertilized pasture. V

Crossing Grass with Wheat

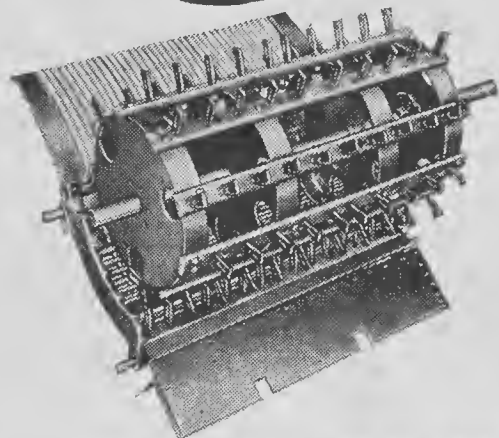
RUST is an uncanny enemy, which may be defeated one year by a resistant wheat variety, but will come back another year in a different form — or race — to consume a crop. It is this problem of conquering one race of rust, only to find another replacing it, that occupies plant breeders in a continuous search for new varieties, in addition to improving varieties for other purposes.

Some promising material has been found at the Dominion Laboratory of Cereal Breeding, Winnipeg, where Dr. R. C. McGinnis has been crossing wild grasses with wheat. Several of these grasses, such as wheatgrass, have excellent stem and leaf rust resistance, and have been crossed with wheat, followed by repeated back crosses to the wheat parent. The seed of hybrids is treated with X-rays, or other sources of irradiation, to break up the grass chromosomes, which carry the hereditary characteristics of plants, and to attach a piece of grass chromosome to the wheat chromosome. This can transfer rust resistance from grass to wheat.

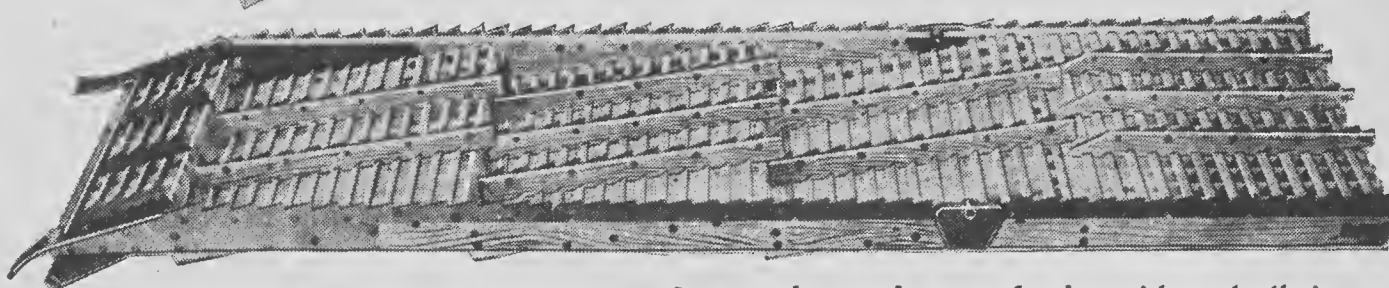
Several advance selections show promise, and are being tested in the field this summer under severe rust conditions. If they still show good resistance to rust, and also high quality, this will be an important advance in the war against rust. V

Greater Yields—Cleaner Grain

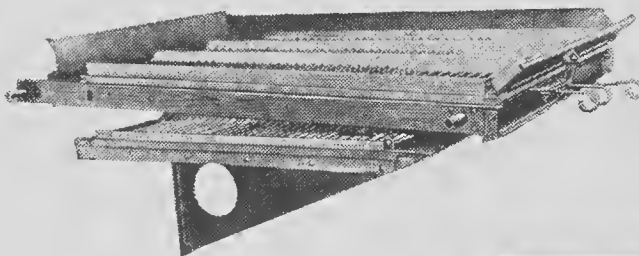
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ACME—Neufeld Motors
ALIX—Loewen's Esso Service
ALLIANCE—Marlow & Peacock

ATHABASCA—Athabasca Universal Garage
ATHABASCA—Frank Falconer
BARONS—Home & Farm Supply
BARRHEAD—Robinson Brothers
BAWLF—A. P. Nelson and Son
BEAVERLODGE—Davis & Olsenberg
BENTLEY—W. H. Peterson
BESHAW—N. J. Holt & Sons
BINDLOSS—Ross Hall
BLACKFOOT—Bond Farm Equipment
BLACKIE—E. R. Egeland
BLUEBERRY MOUNTAIN—J. Bird
BON ACCORD—Fred Abremski
BOW ISLAND—Bishop & Malo
BOW ISLAND—Bow Island Auto Service
BOW ISLAND—Del's Welding
BOYLE—Boyle Motors & Implements
BROOKS—Murray Gordon Machinery
BRUDERHEIM—Strong and Sons Ltd.
BURDETT—C. H. Weatherhead
BYEMOOR—Ross Machine Shop
CALGARY—Machinery Service & Supply, 1006—9th Ave. E.

CALMAR—Wedman & Son
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CARSTAIRS—Richmond & Tronnes
CASTOR—Castor Motors
CAVENDISH—Willard's General Store
CHAMPION—Champion Farm Service
CHAMPION—Harris Motors
CHAMPION—Nelson Hardware
CLARESHOLM—Mag's Service
COALDAIE—Jake Neufeldt
CONSORT—Kroeger Brothers
CORONATION—C. Bruggencate
CORONATION—Cor-Vet Sales
CRANFORD—Melford Service
CRAWFORD—Peterson's Service
DAWSON CREEK (B.C.)—Aspol & Lane
DELBURNE—Roy's Sales & Service
DELLA—Iarkin & Isaac
DERWENT—Hanasyk Farm Equipment
DONALDA—Clements Hardware
ECKVILLE—Kasha Farm Equipment
EDMONTON—Farm Implement Co.
ELNORA—Rollinson & Dahl
EMPRESS—Fred's Service Garage
EMPRESS—Glen Tarr
ENCHANT—Enchant Mercantile
ETZIKOM—Bishop's Lumber & Hardware
FAIRVIEW—Archie Robertson
FOREMOST—Calhoun Sales & Service
FORESTBURG—McNabb Electric
FORT MACLEOD—Macleod Welding Shop
GARDSTON—Top Notch Farm Equipment
GIBBON—Knott Brothers
GLEICHEN—Central Motors
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GRASSY LAKE—R. E. Calvin
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LLOYDMINSTER—Esler & Lightfoot
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MARWAYNE—Hancock and Ashworth
MEDICINE HAT—Art Mosches
MEDICINE HAT—Jacobsons Farm Equipment
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MIRK RIVER—D. T. Eves
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MUNDARE—Red Head Service
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OYEN—Scory Motors
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HORTICULTURE



F. J. Weir, Manitoba Provincial Horticulturist, examines a caragana shelterbelt. Taller growing species are more satisfactory, as a rule, for farmstead protection.

Migrant Native Plums

PERHAPS the most important native fruit in the prairie provinces is the Manitoba native wild plum. W. D. Evans, who is in charge of the Prairie Co-operative Fruit Breeding Trials at the University of Alberta, has inaugurated a plum immigration policy for that province. Learning that seed from open-pollinated Manitoba wild plum selections was available at the Morden farm, he has obtained about 40 pounds of this seed for distribution along the valleys of the Pembina, Sturgeon, North Saskatchewan, Blindman and Red Deer Rivers in Alberta. This seed had already been subjected to 180 days of cold treatment to break the normally long period of dormancy, and after broadcasting it to simulate natural dropping from trees, it may be expected to germinate fairly quickly.

This move might eventually provide an additional wild fruit for Alberta, and in any case will parallel the Rocky Mountain House wild fruit improvement plan inaugurated by the Division of Horticulture at the University of Alberta a year or two ago.

Pruning Tomatoes

TOMATO varieties are of two principal types—the self-pruning or dwarf type, and the staking or indeterminate type. The first type are neither pruned nor staked, but the latter type are adapted to staking and pruning.

A single stem is desirable, but it is necessary to keep the young shoots broken off that appear in the axis of the leaves, without injuring the terminal growth.

The Experimental Station at Saanichton on Vancouver Island advises that the small side shoots will break off very readily when small, but if allowed to become large, it is difficult to break them off without damaging the plant and it may be necessary to cut them.

The staking type of tomatoes usually develop from six to nine leaves above the ground before the first blossom cluster appears. Between this cluster

and the next there are three more leaves, and so on, until four or more trusses have formed. Generally, the Station suggests, it is good practice to nip out the terminal or tip growth on the plant immediately above the third leaf after the fifth truss has been formed. This helps to ripen the fruits already set.

If experience indicates that more than about four trusses will ripen during the season, the ripening will therefore be hastened somewhat by nipping off the terminal growth above the fourth truss.

Mulch for Shelterbelts

PRAIRIE farmers, and those in other parts of Canada who may have occasion to plant shelterbelts of trees, are usually advised to give the shelterbelts clean cultivation for a few years after planting, to control weeds and conserve moisture. John Walker, superintendent, Forest Nursery Station, Indian Head, Saskatchewan, warns however, that the cultivation of trees should be discontinued after a few years so that a natural mulch of leaves and other decaying material may accumulate under the trees. Even weeds can occasionally be useful. In the dry years of the thirties on the prairies a great deal of Russian thistle blew across fields on the open plains until trapped by fencings, buildings or trees. In one instance, many Russian thistles blew into the trees on the west side of a shelterbelt, where they formed a mulch that smothered out grass and weeds, and permitted the trees to develop into a fine wind-break.

Test plantings at the Indian Head Station support the value of mulch under shelterbelt trees. Such a mulch, whether under evergreen or broad-leaved trees, should be natural mulch, so that the root development in the most fertile soil near the surface may not be interfered with. It is not considered good practice, however, to apply deep mulches under trees, consisting of material which would provide a haven for rodents, or which would become a fire hazard or absorb too much seasonal rainfall. Generally speaking, cultivation should be continued along the margins of the tree belts.



- The Province of Saskatchewan provides its residents with financial protection against costly hospital bills through the SASKATCHEWAN HOSPITAL SERVICES PLAN.
- Newcomers to the Province become eligible for coverage under the Plan after residing in it for six months.
- If you are a newcomer to Saskatchewan, you should take proper steps to obtain protection for you and your family before you have completed six months' residence in the Province.

HERE'S HOW THE PLAN AFFECTS NEW RESIDENTS

1. You should pay your hospitalization tax before the first day of the seventh calendar month following entry into the Province.
2. Coverage for hospital bills will then be provided from the first day of the seventh calendar month after arrival.
3. If you are late paying your tax, benefits will start one month after date of tax payment.
4. The tax which new residents pay to obtain coverage until December 31 is at the rate of \$1.26 per month for adults and 42 cents per month for dependents under 18, with a family maximum of \$3.34 per month.
5. Pay at the nearest SHSP tax collection office of the city, town, village, rural municipality or local improvement district in which you live.

FORMER RESIDENTS

Former residents who return within two years from the end of the calendar year in which they were last covered for four consecutive years under the Plan are eligible for renewal of protection from the first day of the second month after their return.

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SASKATCHEWAN
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POULTRY



[Don Smith photo]

Proper ventilation, walls and ceilings insulated to keep an even temperature, and a warm, dry floor are important for satisfactory poultry health and production.

Pasture And Growing Rations

THE future egg production of pullets depends, among other things, on the ration fed on range. Growth is slower during this rearing period, which follows brooding, and it has been found that feeding practices are often indifferent at this time.

The Brandon Experimental Farm has been studying this aspect of nutrition, when the change is made from chick starter to growing rations. Growing mash is generally formulated to be fed with an equal amount of grain, and this should be followed if the birds do not have access to good pasture. If mash and grain are fed free choice, poultry tend to eat too much grain and not enough concentrate for their growth and maintenance. It is recommended that the mash should be kept before the birds at all times, and that the grain is limited to equal the amount of mash consumed.

Pasture plants are good sources of minerals, vitamins and protein, and if good pasture is available, grain can become the larger portion of the total feed consumed in later stages of growth. Start to increase the grain in the ration at about 15 weeks of age, until the birds are receiving three parts of grain to one of mash at the end of the rearing period. Forage plants reduce considerably the total feed required in the growing period, as well as the amount of mash in it. ✓

U.S. Using Hormone Pellets

STILBESTROL pellets make better large-type turkey broilers, which are even fatter than small-type turkeys not treated with stilbestrol, reports Jack Adams, poultry specialist at the University of Wisconsin. Stilbestrol also makes the large types grow faster, and make better use of feed.

Turkey broilers have been getting a bad name, says Adams, because of poorly finished birds on the market. At the conventional broiler weight, they have not had enough fat covering to make a plump, juicy bird for the table. In view of the results, he is now recommending hormone pellets for large type turkeys, and says stil-

bestrol has been approved by the U.S. Pure Food and Drug Administration. The recommendation is to use only one 15-miligram pellet not more than three weeks before slaughtering.

The approval and recommendations do not apply in Canada. ✓

Rapeseed In Poultry Rations

RAPESEED oil meal, although it can only be used safely in limited amounts, has a place in the poultry ration, according to tests being made by Professor D. R. Clandinin at the University of Alberta. He says that rapeseed meal will not entirely replace soybean oil meal for poultry, but five to ten per cent can be used without harm in growing and laying rations.

One of the dangers of rapeseed oil meal, even at the rate suggested, is that it tends to produce goitre in chicks, and stabilized iodine must be added to counteract it. A study is being made of its tendency to depress growth if too much is fed. ✓

Reducing Floor Space

GOOD poultry housing is expensive to build or remodel, and one of the best methods of reducing the cost per bird is by allowing only one and one-half to two square feet of floor area each, instead of the conventional three to five square feet per bird, according to Arthur H. Schulz, of the North Dakota Agricultural College.

He says that many North Dakota farmers have crowded their birds without reduction in production during the past several years. But, where there is crowding, there must be adequate eating, watering and laying space, and adequate ventilation. De-beaking is also recommended to reduce cannibalism.

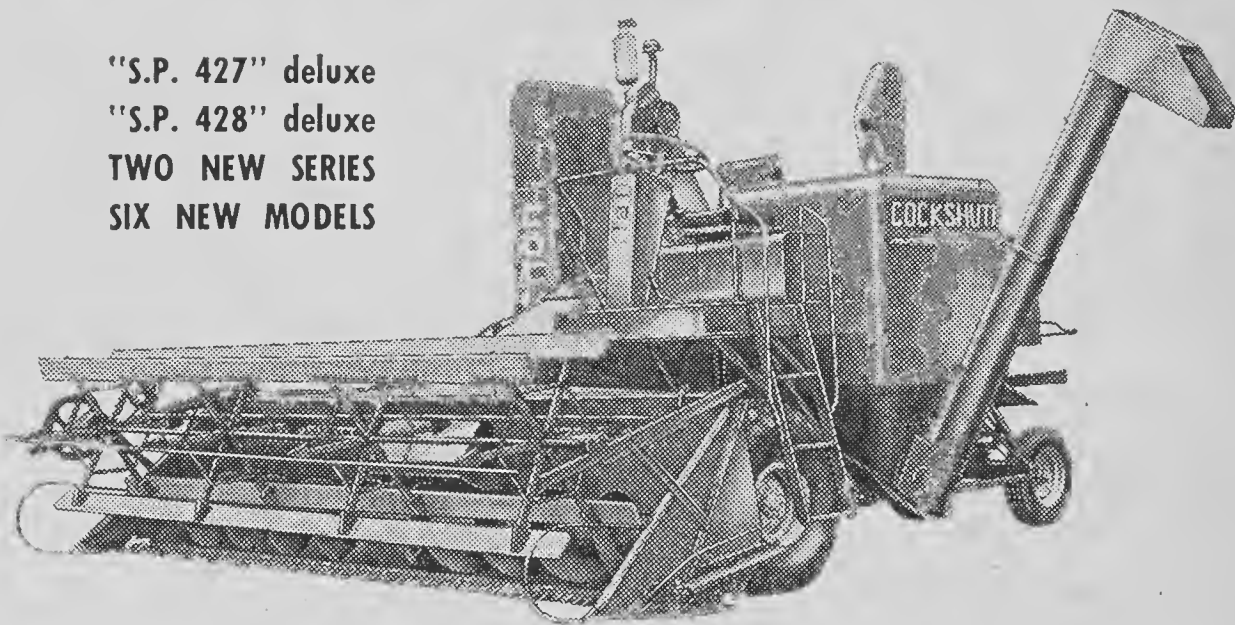
Arthur Schulz suggests a fan ventilating system to provide three cubic feet of fresh air per minute per bird, at least three inches of feeder space per hen, and one waterer for 200 to 250 hens. Automatic waterers on the roosts are usually the most satisfactory. He also recommends one individual nest for four or five birds, or one square foot of community nest per six birds. ✓

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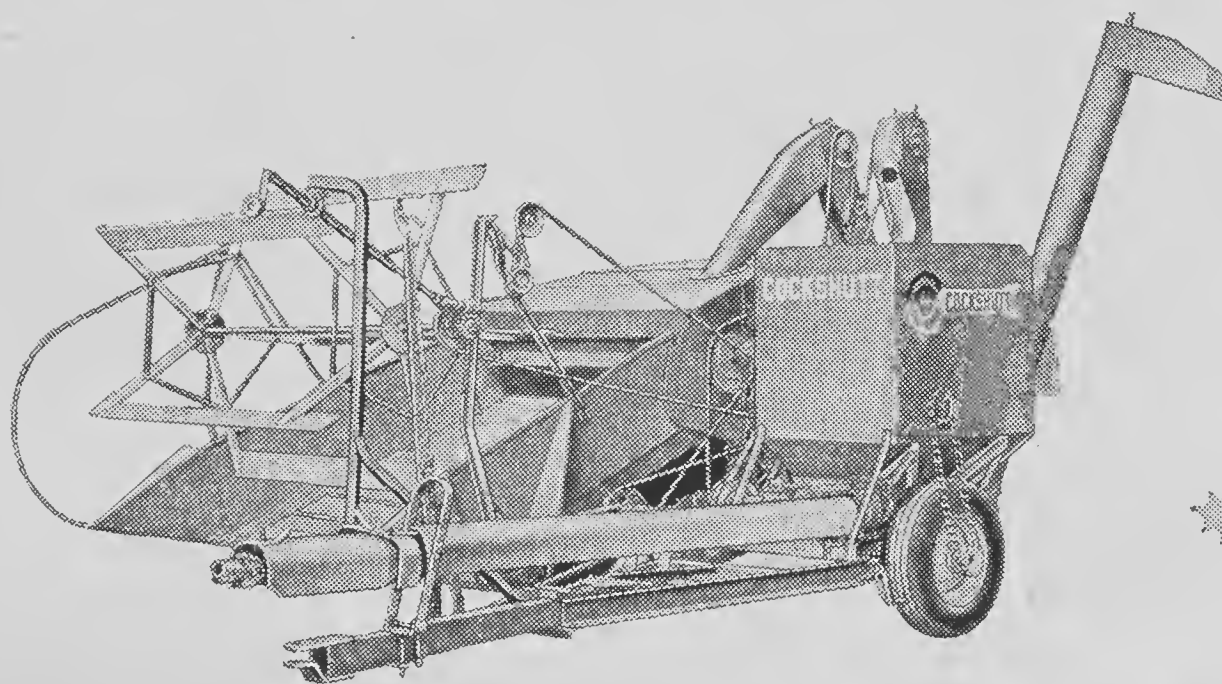
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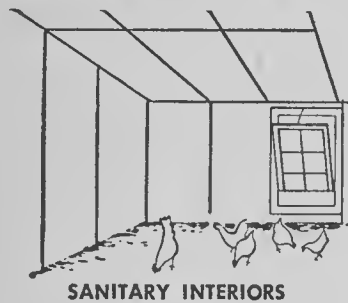
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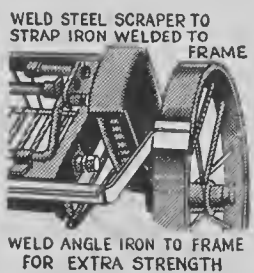


WORKSHOP

Outdoor Jobs For the Better Days

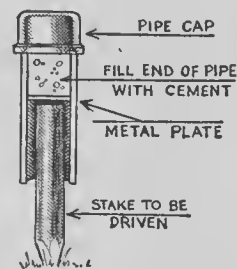
Time and money savers which should help along the work around the farm

Wheel Scraper. I have found a wheel scraper that works most effectively in wet fields. First I needed two pieces of heavy strap iron, each about 2½' long, and bent them as shown (one for each wheel). A piece of sheet steel the width of the wheel was welded, or bolted, to the bent end of one of the straps, and the other end of the strap was bolted to the front frame of the cultivator. I also welded a piece of angle-iron to the frame for added strength. The process was then repeated for the other wheel. I have found these scrapers effective, and by scraping the wheels they enable the cultivator to keep at an even depth at all times.—A.E.H., Man. ✓

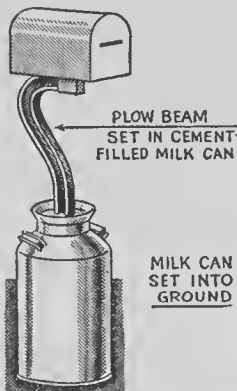


Unloading Drums. It is awkward, strenuous, and often dangerous to unload heavy fuel drums from a high truck or wagon box. To simplify the job, carry an old tire with you, lay it flat on the ground immediately under the end-gate, and roll the drums onto it. The tire will absorb the impact and prevent the drums from springing leaks.—E.O., Alta. ✓

Post Pounder. This is a good way to drive in fence posts. Take a piece of pipe, about two feet long and three inches in diameter. Fill one end of the pipe with cement and put a metal cap over it. You then slip this home-made pounder over the post and slide it up and down. A metal plate underneath the cement prevents it from breaking up. It is useful to make these pounders to fit different sized posts, and they can be carried easily on the tractor. Friction tape on the outside of the pipe gives you a good grip.—S.B., Sask. ✓



Mailbox Support. To provide a durable, weather-resistant support for a roadside mailbox, I have used a plow beam set in a milk can, which has been filled with concrete. I mounted the mailbox on the upper end of the beam, and sank the milk can partly into the ground to hold it upright. This is a simple operation, and it is very effective.—J.J.W., Alta. ✓



Nut Remover. A corroded nut is difficult to remove. If you slip a length

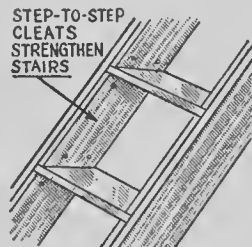
of pipe over the handle of your wrench, you increase the mechanical advantage and the nut can be shifted more easily. This also works if you have a tough time either removing or tightening a length of pipe.—S.B., Sask. ✓

Cattle Scratcher. I find a tire, mounted between two posts and held by two bolts in each post, makes a dandy cattle scratcher. The lower bolt on each side can be removed to turn the tire upside down, when I want to stuff it with sacking soaked with pest killer, and I can then swing it back into position with ease.—M.M.E., Alta. ✓



Hauling Stones. When hauling heavy stones, a lot of lifting can be avoided by using an old truck tire. Hitch the tire to the back of a vehicle, roll a stone into the hole in the middle of the tire, and then drag it off the field with your tractor or truck.—R.McK., Sask. ✓

Stair Strengthenener. Here is an idea for strengthening the stairway in the basement or hayloft. Instead of nailing a 2" cleat under each end of every step, get a 6" board, or any width slightly less than the rise of each step, and make full width cleats on the inside of the stairway, touching the steps above and below, as illustrated. It is almost impossible for the steps to let you down, even under heavy loads.—V.A., Alta. ✓

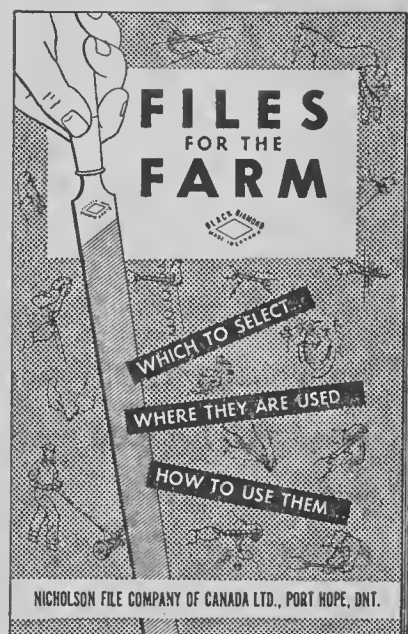


Hand Guard. To protect against bruised hands and knuckles when using a bale hook, a swiveling sheet metal guard can be made easily and fitted to the handle of the hook. It is important to allow sufficient clearance for your hand between the handle and the inside of the guard.—S.C., Fla. ✓



Hose Connection. If you lack a clamp for holding a connection on your garden hose, wrap about 20 turns of strong cord tightly around the hose, after inserting the connection. By laying one end of the cord along the hose, and then making the turns over it, leaving only a small loop uncovered, you can slip the other end of the cord through the loop, and then pull the loop tight to secure it.—G.M.E., Alta. ✓

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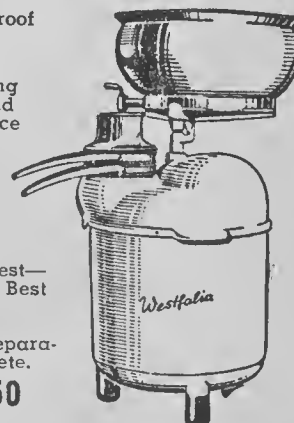
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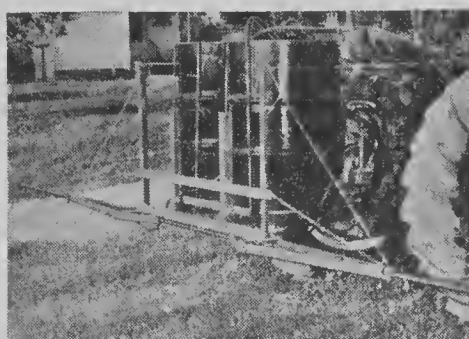
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WHAT'S NEW



The Feed Piper delivers feed in bulk directly into farm bins. The feed is discharged from a truck by compressed air, which can blow it as far as 100 feet horizontally or up to 70 feet vertically through a four-inch pipe, delivering more than 12-ton loads, say the manufacturers. (Sprout, Waldron & Co.) (126) ✓



Illustrated is a V-type stabilizer supporting a spray boom rigidly, but hinged to allow the boom to swing forward or backward and upward on a center pivot as a protection against obstructions, according to the manufacturers. It eliminates need for springs. (Comfort Equipment Co.) (127) ✓



This self-unloading P.T.O. forage box is made with a "do-it-yourself" kit. The manufacturers describe it as having a side-delivery chute which unloads automatically into a forage blower, trench or pit silo, and also into feedlot bunks, where green chopped feed is cut daily and brought to cattle. (Gehl Bros. Mfg. Co.) (128) ✓

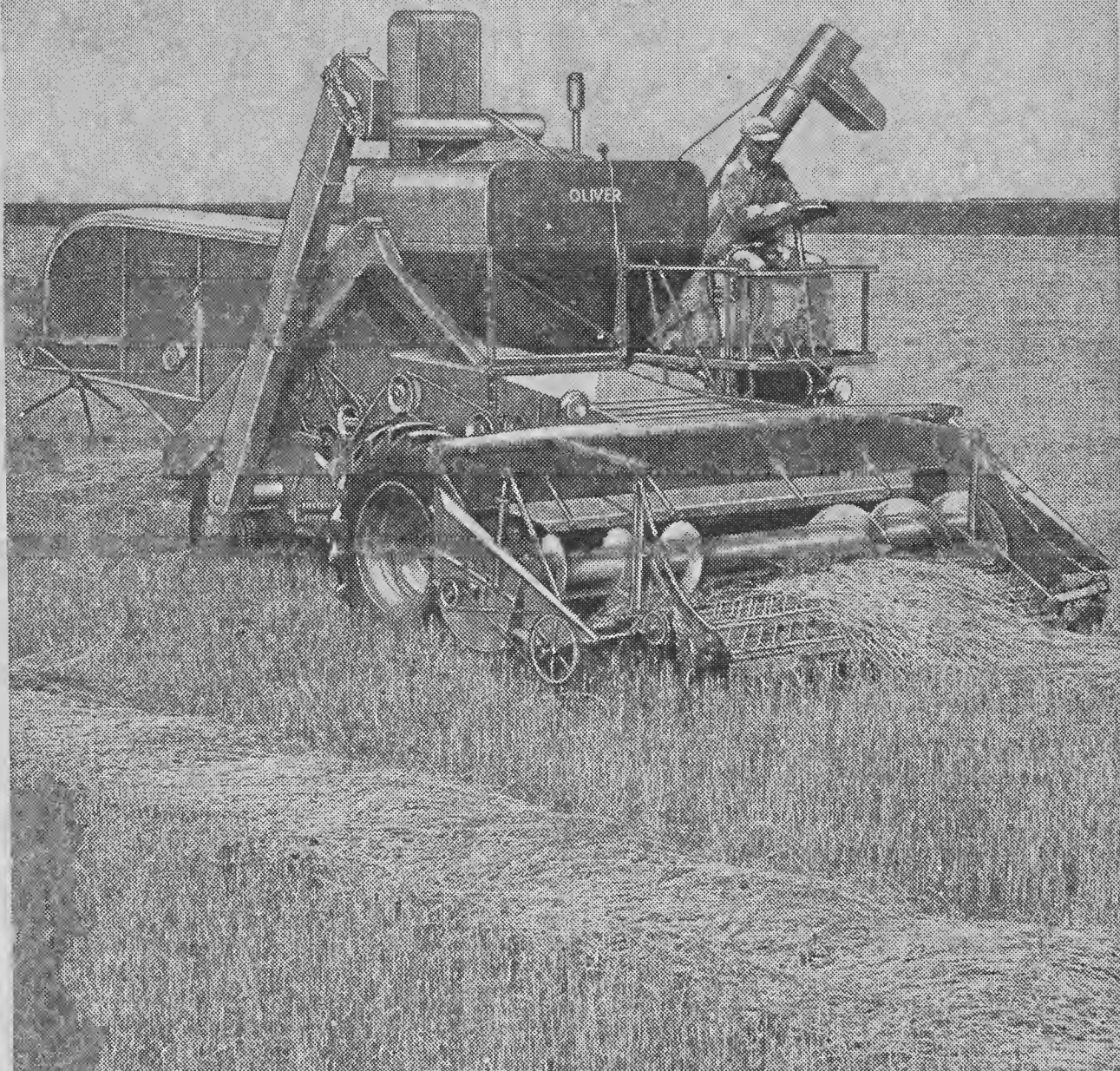


This electronic device, the Lean-Meter, evaluates livestock without slaughter, on the principle that fat conducts electricity poorly, but lean is a good conductor. A slender needle penetrates the flesh, but does no harm, say the manufacturers. Fat and lean measurements appear on a dial. (Duncan Electric Mfg. Co.) (129) ✓

For further information about any item mentioned in this column, write to What's New Department, The Country Guide, 290 Vaughan St., Winnipeg 2, giving the key number shown at the end of each item, as—(17).

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On the farm and at home



Fun at the lake and an ideal opportunity for swimming instruction.

Have a Swimming Buddy

WHAT an exciting discovery: you can stay up in the water alone and are actually swimming! It may just be "dog paddling" but you have become confident that the water will buoy you up and you move forward. Now you are ready to learn the breast stroke and crawl, how to tread water and float. There's so much fun at swimming ponds and lakes—water skiing, boating, racing, diving—that you won't want to miss any of it. It's not enough to be able to float and swim in some fashion. You should swim correctly, know when conditions are safe and what to do in an emergency.

Swimming instructors tell us that it is those who *can swim just well enough* who get into trouble. They attempt distances that are beyond their ability and swim under foolhardy conditions. It is especially for these people that the Buddy System was begun.

Never swim alone is the first rule of swimming safety. Anyone who goes swimming should have a partner (buddy). Partners enter and leave the water together. When groups of people are shouting and laughing as they play about in the water, it is easy for one person to slip under and no one notice while he drowns in shallow water or close to shore. The Buddy System means there are two voices to call for help, two pairs of eyes to watch for danger and one swimmer to hold the other up in case of cramps or sudden illness.

During the summer months the Red Cross Society sends swimming instructors throughout Canada to hold classes at lakes, rivers or ponds to teach as many people as possible how to swim. Watch for an announcement telling where those living in your district can get this free instruction. The Red Cross also conducts swimming tests for beginner, junior, intermediate and senior swimmers. To win the beginner's badge, a swimmer must have a knowledge of water safety, be able to

do three reaching assists, open eyes under water, bob continuously six times, do the jelly fish roll, front and back glide and make a continuous swim of 40 feet and tread water. To qualify as a senior, a swimmer must make a continuous swim of 300 yards, know how to do life saving and give artificial respiration and perform shallow and running dives.

To become a competent swimmer work toward winning these awards. Not only is it a great honor to pass the tests but the knowledge and skill you gain may save your or a friend's life. V

Clubs in British Columbia

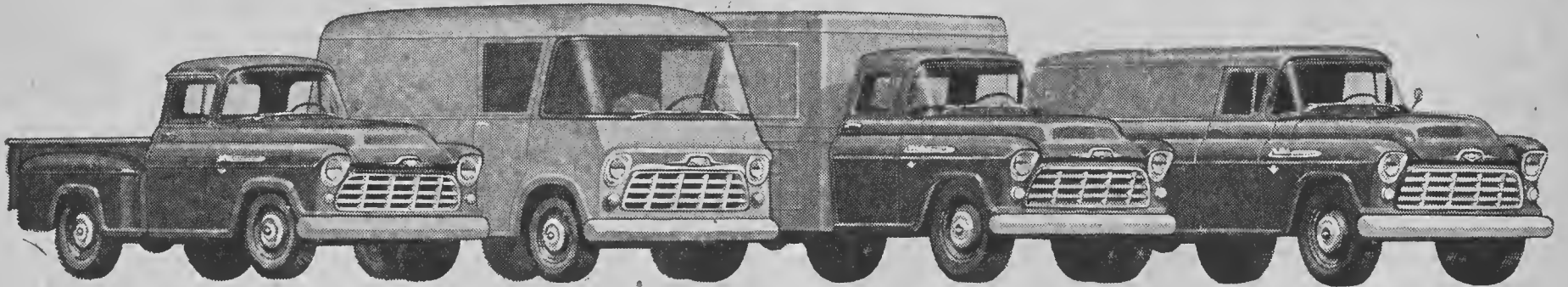


CHILLIWACK Beef Club played host to the Surrey and Langley Beef Clubs at the farm of Oliver Wells. Twenty-nine members competed in four classes—Aberdeen-Angus, Ayrshires, sheep and feeders. Top placing went to: Elaine Wooley (197 points), Pat Willis, Dave Heppell and Morley Zant (tied 194 points), Wilma Wills and Roberta Wilson (tied 191 points).

"Management of Laying Birds" was the topic chosen by Mary Andrews when she spoke to the Chilliwack Poultry Club. She pointed out that one of the main points to be considered is comfort for the laying birds. Fresh air, dry floors and uncrowded conditions are essential. A space of three or four square feet for a heavy breed bird is recommended, she said. Birds should be culled often to get rid of the birds bringing in low returns and thus reduce feed costs. Poor layers can be recognized by dull scales, sunken eyes and deep yellow-colored beak. Such birds molt early, and often appear dull and listless, their pelvic bones are usually thick, rigid and close together.

Mona Gross gave instructions on egg handling, emphasizing that there should be 20 nests filled with shavings for each 100 birds. Eggs should be gathered three times daily in wire baskets, cooled for six hours in a temperature of from 55 to 60 degrees,

Packing the biggest power punch in history!



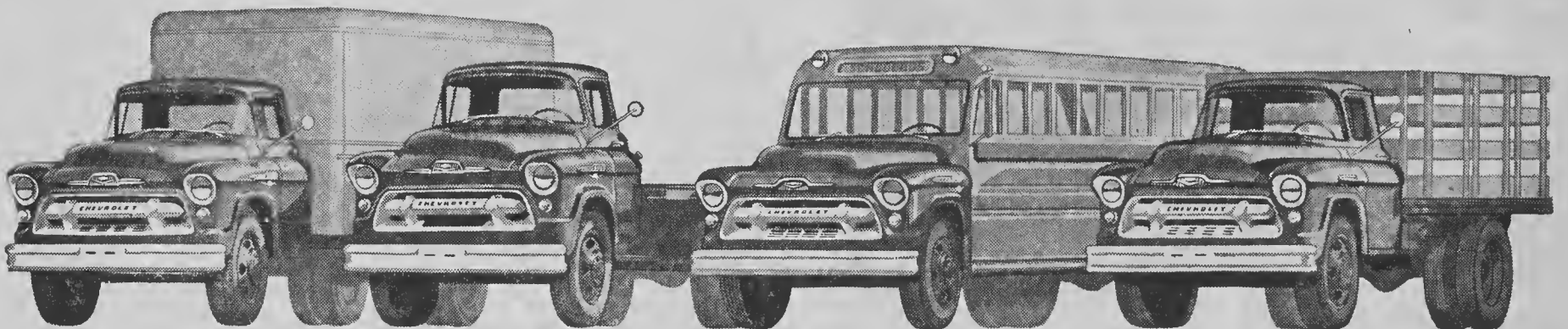
New 1300 Series truck, Model 1314.

New 3/4-ton Forward Control chassis,
Model 1457.

New 1-ton truck, Model 1433.

New 1-ton panel, Model 1435.

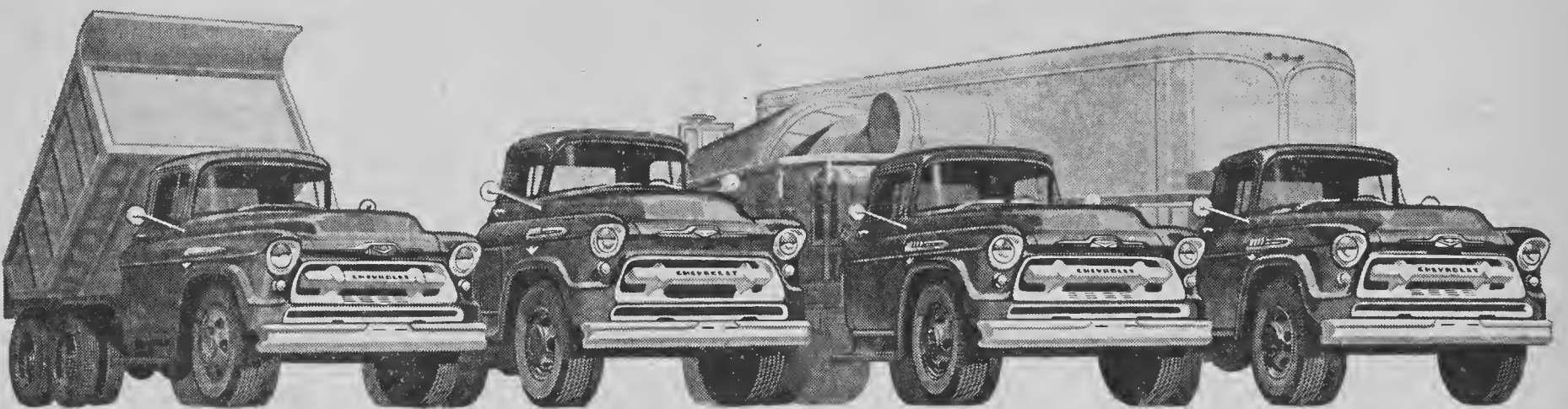
NEW LIGHTWEIGHT CHAMPS !

New 1600 Series truck pictured with
van body.New 1800 Series L.C.F. with
platform body.

New 1600 Series school bus chassis.

New 1500 Series stake truck.

NEW MIDDLEWEIGHT CHAMPS !

New W1900 Series truck with
Triple-Torque tandem.New 7000 and 9000 Series L.C.F.
(Low Cab Forward) cab.New 1900 Series truck illustrated
with concrete mixer unit.New 1700 Series model shown as
tractor with semi-trailer.

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A modern, short-stroke V8 for every model — and four famous 6-cylinder engines with higher horse-powers than ever. Seven brilliant engines in all! New front axle rated at 7,000 lbs. on heavy duty series — new rear axles rated at 18,000 lbs. And a trucking "first" — revolutionary Triple-Torque Tandems with more advanced features than any other tandem on the market.

New wider choice in transmissions — automatic and Synchronesh!

Now — a work-saving, engine-saving automatic for every series! The range of Hydra-Matic models has been expanded, and Chevrolet proudly introduces an exclusive new heavy-duty 6-speed automatic — Powermatic, with the Hydraulic Retarder that saves service brakes! There's also a complete line of Synchronesh transmissions for every model!

**Anything less is an
old-fashioned truck!**

CHEVROLET Task-Force TRUCKS

YOUNG PEOPLE

then cleaned and packed to ensure top quality Grade A. John Andrews, club leader, showed members how to cull chicks.

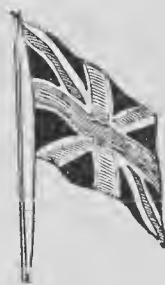
British Columbia Association of Future Farmers of Canada, meeting at their sixth annual convention at Kelowna, elected John McFaul, president; Erin Moore, first vice-president, and Walter Lutz, secretary. The public speaking contest was won by John Pankratz on the topic, "The History of Dairy Cattle." Grand aggregate award for the judging competition went to the Kelowna club. Dean Blythe Eagles, University of B.C., addressed the boys and their leaders from points as far south as Creston and north to Dawson Creek.

Miss Echo Lidster reminds 4-H Club members of the importance of fairs in their program. "Fairs serve as a focal point for much 4-H Club work. If you are a member of a 4-H Club you are obliged to show at your local fair or Achievement Day. This is part of the community participation expected of a 4-H Club member. There is something about exhibiting at a fair that gets in your blood. Once you have started exhibiting, you may be sure that you will become a fairly steady participant from then on. The purpose of a fair has been aptly summed up in the motto—"Show what you grow and share what you know."

Proudly It Waves

THE crowd stands at attention as the Union Jack is quickly raised to the masthead. Reverently the people join in singing the National Anthem. It is a thrilling ceremony undertaken solemnly and respectfully.

On national holidays, at field days, club rallies or whenever the Union Jack is flown, certain rules of etiquette should be observed. The flag should



not be raised before sunrise nor allowed to remain up after sunset. The flag should be flown with the broad white stripe of the Cross of St. Andrew above the red stripe of St. Patrick on the side of the flag next the staff. When the flag is to be flown at half-mast it should first be raised to the top of the staff and then lowered to a midway point. In lowering the flag from half-mast position it must be run up to the full height and then dropped.

The flag should always be carried upright and never allowed to touch the ground. If the flag is to be used on a float it should fly from a staff. It should never be used as a drape over a vehicle.

When flags of two countries are flown they should have separate staffs. The Union Jack is always in the place of honor on the right and never smaller than the other flag. When flags are crossed on a wall the Union Jack should be on the right, i.e. the observer's left.



In the Smith milking parlor, Peter Anderson puts teat cups on next cow.

Dairy Farm In Southern Alberta

LIKE Topsy, the Smith Dairy, at Cardston, just "grewed and grewed" until it now has one of the biggest dairy herds in southern Alberta. But unlike the case of Harriet Beecher Stowe's famous character, this growth was planned, year by year, to keep pace with the needs of a thriving community.

When the late Willard Smith and his son, Theron, bought the George Duce farm on the outskirts of Cardston in 1943, there were only 35 Holstein cows on the place. Today, counting young stock, the herd has been increased to 180 head plus two purebred Holstein bulls.

The farm now produces between 1,600 and 1,700 pounds of fluid milk per day for the local market, and employs a staff of seven full-time workers. In addition to this, it has its own pasteurization plant and manufactures a popular ice cream mix.

"Don't get the idea that we just operate a dairy," Theron Smith said. "We also do a bit of farming around here."

By farming, he referred to the 450 acres sown each year to wheat, barley, and oats, the remaining 500 acres being used for pasture and hay. The main hay crop is sweet clover, which is fed with a daily grain ration of oats and barley.

For producers around Cardston, milk marketing is a sort of one-way street. They are unable to ship to the potentially large Lethbridge market farther north, because this has been declared a closed area. Lethbridge producers, however, can ship to Cardston anytime they want. Recently, when they started to ship in milk and undersell the local product, the whole business erupted in a court case. The court ruled that this was unfair competition, because the Lethbridge shipper involved wasn't paying his milk suppliers the going price.

The basic cause of the dissension has yet to be resolved—Lethbridge is still a closed area, and outside producers won't be content until this state of affairs is changed.

Theron Smith put it this way. "We don't particularly want to ship to Lethbridge, but we think everyone in this business should have to compete on an equal footing."

B.F. Goodrich

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- ① BIGGER OPEN CENTRE CLEATS
—for a bigger bite
- ② BIGGER SHOULDERS
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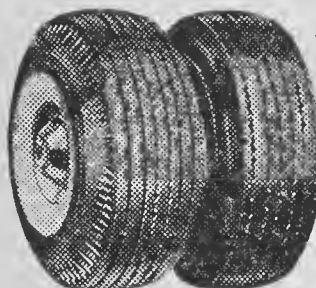
MEASURE IT, YOURSELF!



- Measure the Bigger Cleats, Bigger Shoulders, Bigger Tread.
- See how you get deeper bite, maximum drawbar pull—without sinking... how cleats clean themselves!
- Note how design cuts down slip-page. Makes it easy to keep up to work schedule—even with heavy implements, on wet ground or slick cover crops.

You can work more land, faster, using less fuel with new B. F. Goodrich Power-Grip Tires... that's why it's used on many new tractors. It's Bigger for full traction and longer wear... Bigger to do a better job at all times and give you bigger value for your money.

FOR SAFER DRIVING... TWO TYPES OF TUBELESS TIRES!



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TUBELESS

SAFETYLINER
TUBELESS

The Life-Saver—the ultimate in tire safety. Patented sealant seals its own punctures as you drive... changes bruise blowouts into safe s-s-slowouts. Grip Block Tread defies dangerous skids.

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54-50R

B.F. Goodrich

GET THE FACTS
FROM YOUR LOCAL B F G DEALER

Pasture Program for Quebec Dairymen

"THERE is only one way to cut costs on a dairy farm in the Chateaugay Valley of Quebec, to meet the cost-price squeeze today," says Leon A. Beaudin, the intense and thoughtful agronome at Huntingdon. "That is through improved pastures."

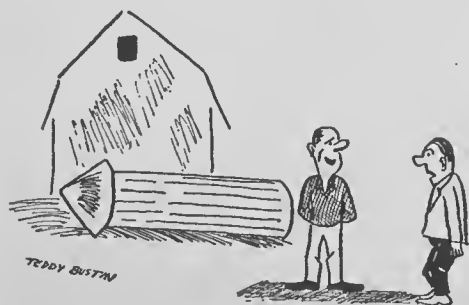
And in that area of once-fertile but often run-down farms south of Montreal, Mr. Beaudin can point to some remarkable examples of how improved pastures have paid off. He calls pastures his No. 1 project, and he can reach into a file and discuss every detail of improvements made by many district farmers. He is enthusiastic because pasture is being recognized at last for the valuable crop that it really is.

One young farmer near the U.S. border improved his pasture until he now carries 18 cows on 12 acres, and also had pasture in April when most of his neighbors barn-fed until mid-May. Another newly converted pasture enthusiast began in 1955, and now has persuaded his three brothers to try it this year. Mr. Beaudin has their names on his list for the current season.

One of his outstanding examples is that of a young veteran who took over a small run-down farm with V.L.A. assistance. The agronome drew a folder from the file, and spread out a farm plan to point out the development here. He noted that from 1952 to 1955, average per-cow production during June had jumped from 640 pounds to 1,039 pounds. "That gain came from the pasture and feed alone," he said. "The cows were almost the same."

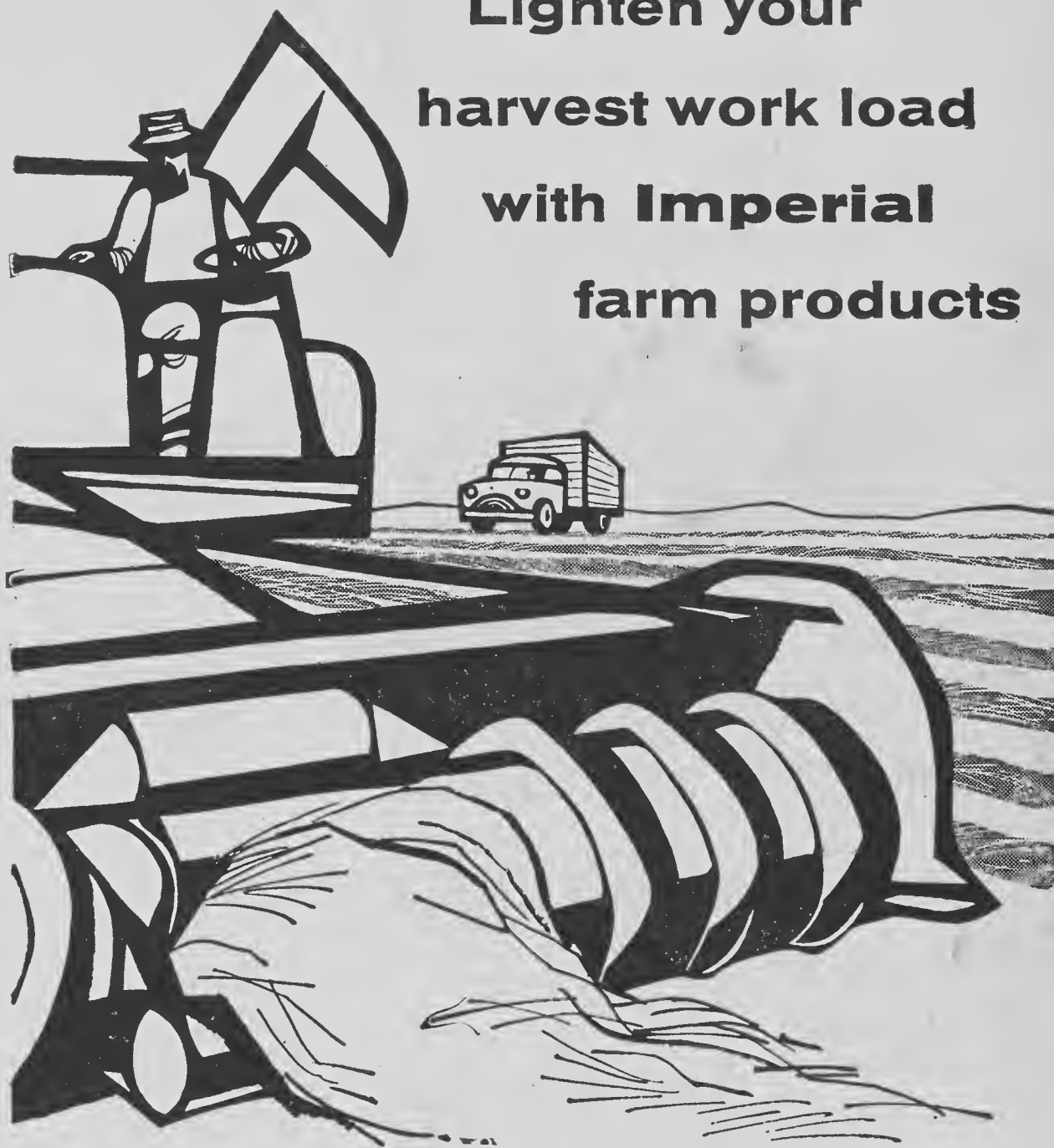
When this farmer decided to set up a pasture program, he called in the agronome. They measured the farm and found 55.4 cultivated acres, including a 4.2-acre field near the barn, which was set out as the spot for pasture. Beside it was another 4.5 acres with less than three inches of topsoil over a limestone base. The latter, too poor for much production, would do for an exercise ground. A four-year rotation of corn or grain, grain seeded down, clover hay, and mixed hay was laid out for the remainder of the farm. Mr. Beaudin and the young farmer were aiming to make the 55.4 acres almost self-sufficient for the 13-cow herd.

The pasture field, which allowed only one-third acre per cow, was seeded in the spring to four pounds timothy, six pounds brome grass, four pounds red clover, four pounds alfalfa, two pounds birdsfoot trefoil, two pounds ladino, along with a nurse crop, and fertilized. It was divided into two sections, and pastured that sum-



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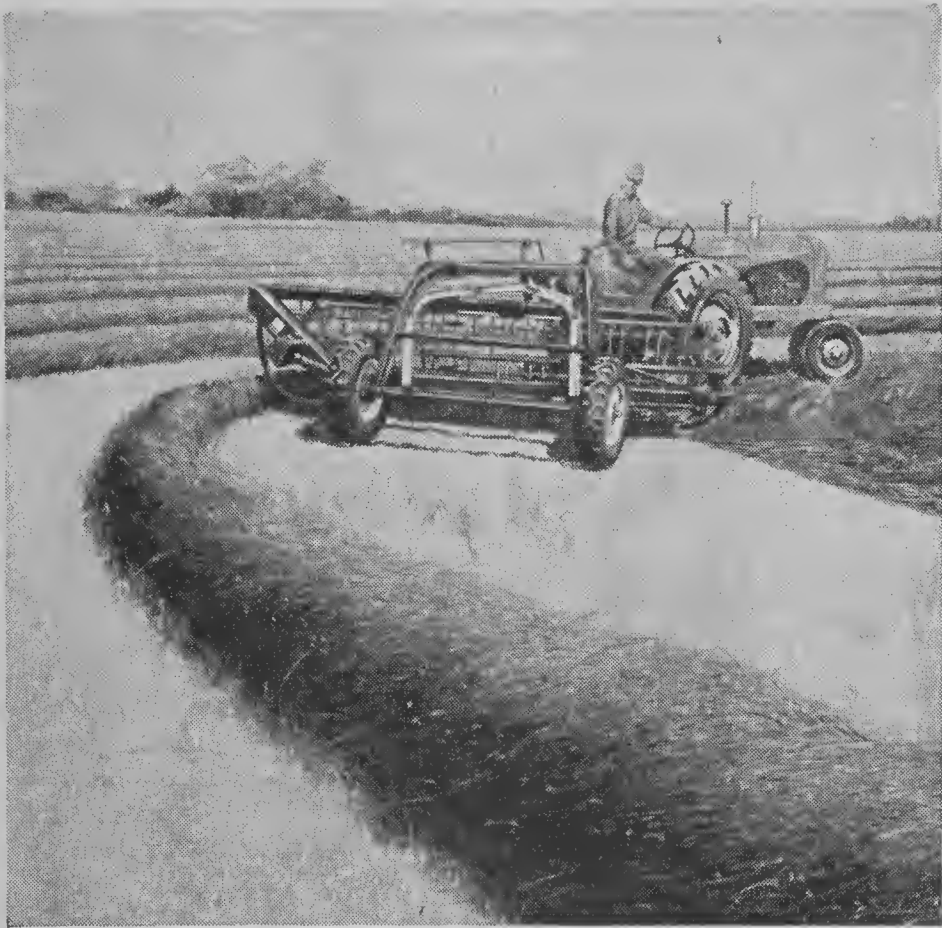
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Simple, direct drive matches ground speed to reel speed

Fast stepper with a velvet touch

At ground speeds up to 8 mph you still rake hay *gently* with New Holland's 5-bar reel Rolabar Rake.

Turn the whole field into fluffy windrows in half the time *without* shattering the protein-bearing leaves and blossoms. You get straight, uniform windrows that dry quicker, make baling or chopping faster, pick-up cleaner. On corners, the windrow's uniform, easy to follow, too.

How's it done? First, the Rolabar's 5-bar reel allows low reel

speeds even at high tractor speeds. And second, the Rolabar moves hay from swath to windrow with *half* the forward travel needed by ordinary side rakes—so there's less chance of hay damage.

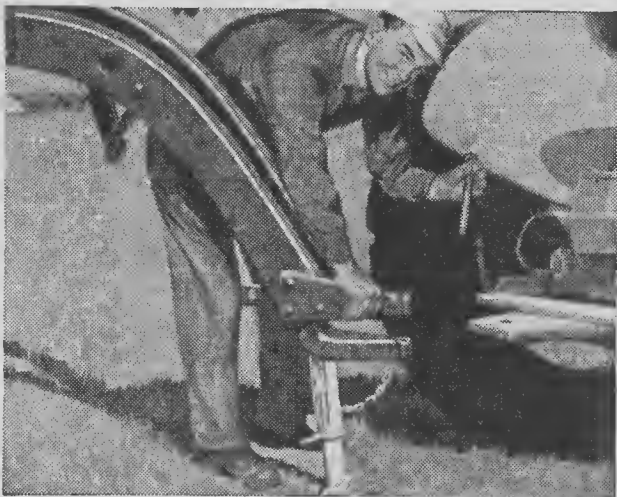
If you want to beat bleaching sun or leaching rain . . . harvest leafy, rich hay, then see your New Holland dealer right away. You'd be surprised at how big a chunk a Rolabar can cut out of your feed bill.

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Exclusive PRES-TO Jack

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It takes only seconds to hitch the Rolabar Rake to tractor. Press down (or pull up) to bring the hitch level with drawbar. Then pivot rake forward into hook-up position and drop pin in. For parking, drop jack and back up. Spring in jack automatically adjusts to correct height.



NEW HOLLAND



"First in Grassland Farming" BRANTFORD, ONTARIO

mer. That fall, it got a dressing of manure, and they aim to fertilize it every second year, probably adding borax to help retain the clovers.

The field was ready. Management was the next factor, which Mr. Beaudin insists is an important factor in getting the most from pasture.

In this case, the farmer decided that since he liked three meals a day himself, maybe the cows would, too. So he turned the cows in on pasture when he went for a meal himself, and when they were full, put them into the 4.5-acre field alongside, that was too poor to put into the rotation. As well, he fed the cows on pasture about two pounds of hay and a pound of crushed oats daily. However, since the pasture was yielding well in the spring, he cut up to two tons of hay from it in the

period of best growth, much of which came off the 4.2 acres. Later, he clipped off coarse growth, when necessary. Since the field was divided, he could change fields every week or so. Later in the summer, hay aftermath was ready.

With this program, this farmer has boosted production so that in June, 1955, the per-cow average was another 400 pounds on top of the 640 he got in 1952. Also, the farm is regaining its fertility.

The grassland program of Mr. Beaudin is catching on so fast, now that the cost-price squeeze is hurting dairy farmers, that he has a list of 40 dairy farmers who have already started grass programs, and by Christmas, 1955, he had a list of 25 others who were anxious to get started this year. V

More Weapons For War Against Weeds

Fundamental research and field testing bring new herbicides for killing weeds

ALTHOUGH 2,4-D and MCP dominate the weed control picture, because of their many uses, there is a large number of other important herbicides, including some still on trial.

Among these, 3,4-D has aroused great interest as a possible answer to the wild oat problem, but more work is needed before it can be recommended. MCPB shows promise for use with legumes. It appears to be safer than MCP with these crops, and effective against more weeds. In Britain, land that was once good grazing, and has reverted to rough grass, has been brought under control in one year with heavy doses of MCPA and MCPB.

Others in this group are Natrin for weed control in transplanted tomatoes, and Erbon (a 2,4-D type), which might control green foxtail in cereals.

The carbamates, another important group of herbicides, include IPC and CIPC, which are applied before seedling and worked in to destroy germinating weed seeds, especially wild oats in sugar beets and peas.

Acids for killing grass include TCA, sold as a sodium salt, which can control perennial grasses like quack and couch. It is used at lower rates for wild millet (green foxtail) in oats and flax, but is expensive. Dalapon, similar to TCA, is a soil sterilant recommended for use with sugar beets, and has been successful in controlling quack grass in potato crops. With 2,4-D, it has given good soil sterilization for one season, and railways are using it on their track beds. TCB, another variant, is being tested for quack grass control.

The urea compounds—CMU and PDU—are pre-emergence treatments, and will sterilize the soil for at least five years, when applied at high rates. They are useful for driveways and around grain bins. At lower rates, they appear to be effective against a wider range of weeds than any known herbicides, but have not been dependable so far. DCU, another of the group, seems to be effective for general weed control in sugar beets, but more testing is needed.

CDA, an acetamide, is still experimental, but shows promise as a pre-emergence treatment for wild oat control in cereals.

The dinitros, such as Sinox, Contax, Dow Selective and Premerge, were temporarily discarded when 2,4-D arrived, but new uses are being found for them with legumes, onions and peas, especially where MCP may be harmful. PCP, another dinitro, looks promising for weed control in potato crops.

Fruitful results are expected from work with oils as herbicides. Some have been effective in parsnip and carrot crops, and others in this category are on the way.

Experiments with MH have shown that it can inhibit growth of wild oats and quack grass, leaving the soil sterile for only two weeks. It has given good control of grass around pear and apple trees, and low concentrations have worked well in chemical trimming of certain hedge plants.

It takes a number of years to develop, test, and make recommendations for a new herbicide. Experimental farms and other research institutions must approve it before it can be licensed for use in Canada, and only then can commercial production begin. The farmer hears of new chemicals, and has to wait a long time before he can buy them, but the system protects his interests. V



4 oz. MCPA sprayed late on flax (r), did less harm than 2,4-D L.V.E. (l.).

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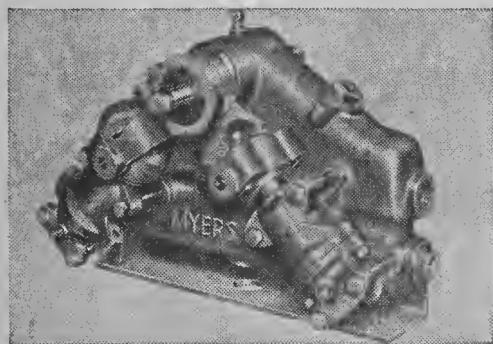


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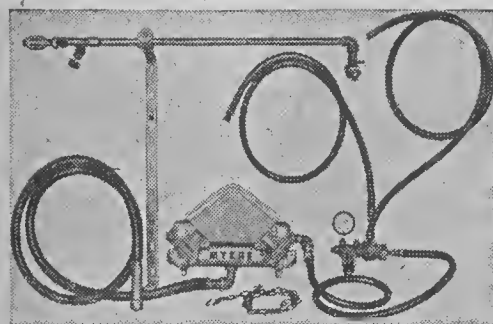


Kill profit-robbing pests with Myers Power Sprayers

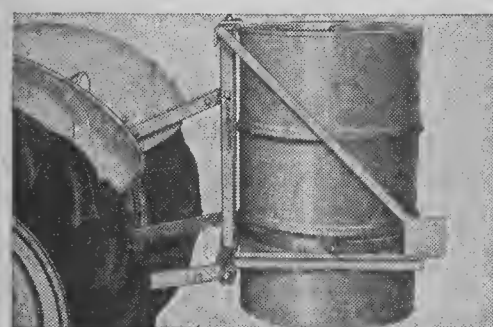
A regular spraying schedule in fields and pastures, stock pens and dairy barns prevents weeds, insects and other parasites from draining away your profits. A Myers Mighty Mite offers the versatility necessary for both low-cost weed control and insecticide application.



Du-All PTO Sprayer Pump: Precision-engineered, this new double-acting, positive displacement pump features spring-loaded valves and plungers operating in satiny, chrome-lined cylinders. Designed to handle corrosive spray materials. All working parts enclosed and fully protected. Mounts directly on 1 3/8" 6-spline PTO shaft.



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Search for Chopattis

Continued from page 11

mixed with fresh bullock dung. The mixture is patted into oval cakes and put on the walls to dry.

THE food-producing potential of the West Punjab is high. There are over ten million acres of irrigated land and more can be added. They grow two crops per year, a summer, or kharif, crop, and a winter, or rabi, crop. The average yield of rice, a summer crop, is about 12 bushels per acre, and the average yield of wheat, a winter crop, is about 15 bushels per acre. The yields of some of the other crops are correspondingly low. Improved seed, improved methods of cultivation, a general use of nitrogen fertilizer, all would increase yields. Their own agricultural experimental stations have already demonstrated ways of increasing crop yields.

The native cultivator is by nature conservative, and by tradition venerates the ways of his forefathers. But he will succumb to new methods if convinced that they are profitable. We went to an agricultural field day that was held on one of their experimental stations. Three thousand cultivators attended that day.

They arrived by bullock cart, on horseback, on camel back, by bicycle, and on foot. They visited the plots where new types of crop rotations were being demonstrated, new and better crop varieties tested, and new kinds of machinery used. They listened to speeches discussing improved farming methods. Those who had made worthy advances in their farming techniques received prizes. For diversion, they watched while their village teams competed in sports events; and throughout the day a boys' bagpipe band from a nearby high school provided music that even our Scottish associate admitted was bonnie.

AND then there is water. There are insufficient storage dam sites on the Punjab plain and few in the foothills area. There are storage possibilities back in Kashmir—but Kashmir is disputed territory. Today, water for irrigation is diverted from the rivers by huge barrages, or shallow dams. Since the river beds are only about 10 to 15 feet below the general land surface these barrages cannot store any appreciable quantity of water. By raising the water level behind the barrage a few feet it can be diverted into the irrigation canals. The amount that can be diverted at any one time is almost directly related to the river flow at that time. At the Trimmu bar-

rage on the River Chenab, the flow has varied from a summer high of over 500,000 cubic feet of water per second, to a winter low of 500 cubic feet. This means that there is insufficient irrigation water for the rabi or winter crops; and the average winter rainfall is not over three to four inches.

Water-wise, the Punjab suffers from a paradoxical situation, too little in the rivers at low run-off and too much underground in the alluvial plain. That 3,000 feet of deltaic silt and sand that forms the Punjab plain is a huge reservoir, and today it is virtually filled with water. Water that through the years has seeped into the land from river beds, ponded monsoon floods, and from thousands of miles of irrigation canals and ditches. This water contains some salt, as does most underground water. In places the water actually comes to the land surface, and in other places the water table is close enough to the surface, that capillary rise will bring it to the top. In the latter case, the salt carried up by this capillary water accumulates as the water evaporates. The more water that evaporates, the more salt that collects. White alkali, mainly gypsum and table salt, is the most common, but the more harmful black alkali is also present. Locally called the "cancer of the Punjab," it creeps into fertile fields in ever-widening ribbons of destruction. Hundreds of thousands of acres of once fertile land are now barren wastes—white with salt; and it is continuing to deteriorate at a rate estimated to be about three acres per hour. These acres would grow enough each year to provide chopattis for 50,000 hungry mouths, and the population is increasing each year. If left to deteriorate at its present logarithmic rate the entire food producing area of the Punjab could disappear.

BUT this cannot be. The land must be reclaimed; and that underground water is one of the keys. Doubling the food producing power of the Punjab is even now within the realm of possibility. The speed with which this is done, depends, in large measure, on the help that the West is prepared to give. The need is for technical help—to pool our technical knowledge and experience with theirs; and financial help, to start major structures and essential industries.

The aid agencies—the United Nations, the United States' Foreign Aid Program, and the Colombo Plan participants—are now giving assistance.

Currently, hydrologic surveys to determine the amount of water in the reservoir and the amount added each year; agricultural surveys to determine



Two years ago the field on the left was as salt encrusted as the other. Salt has turned hundreds of thousands of Pakistan's fertile acres to barren wastes.



"I Longed for Relief from RHEUMATIC PAIN"

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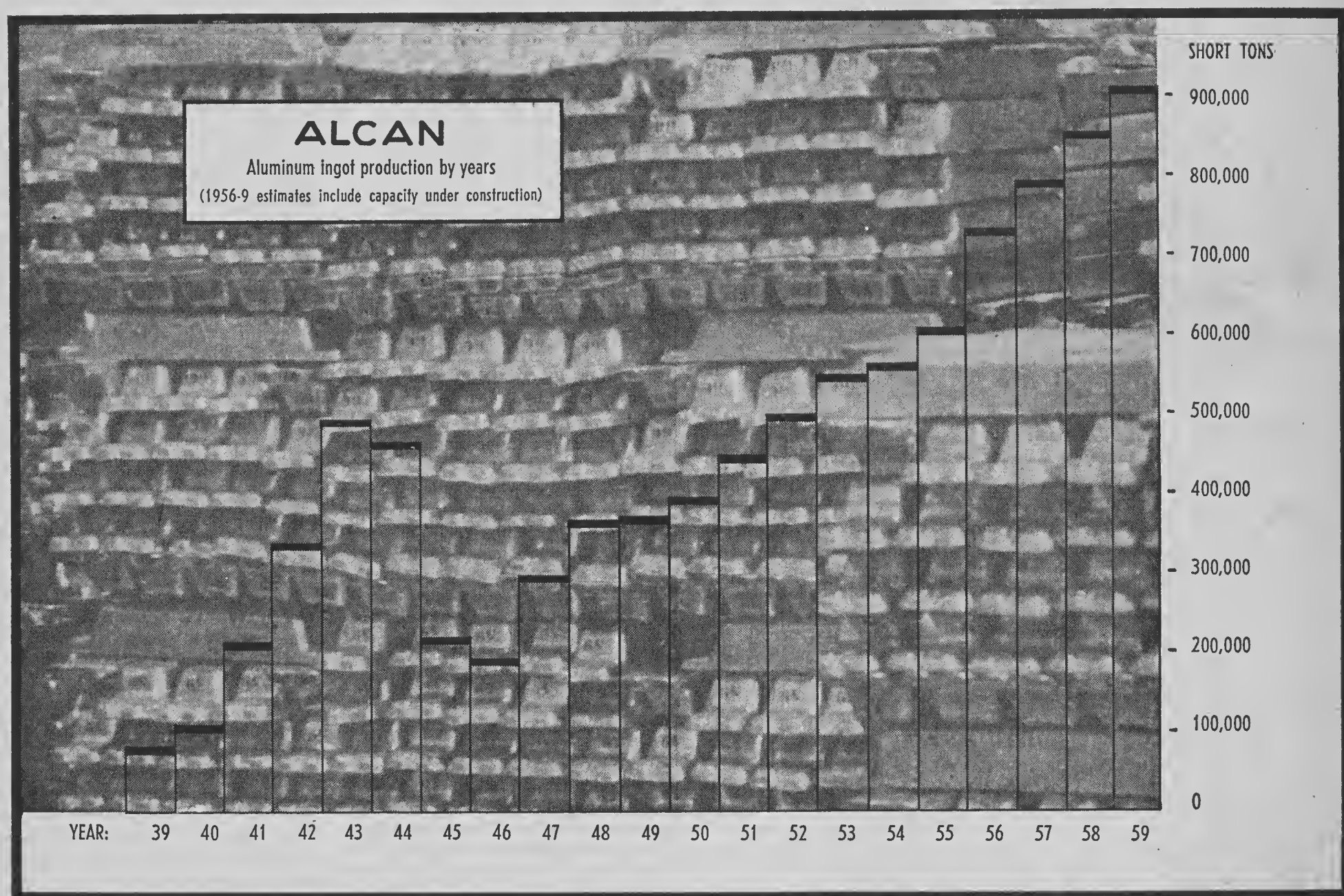
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the fact is that the demands go up at a rate faster than new production can be pushed to completion at Isle Maligne in Quebec and Kitimat in British Columbia.

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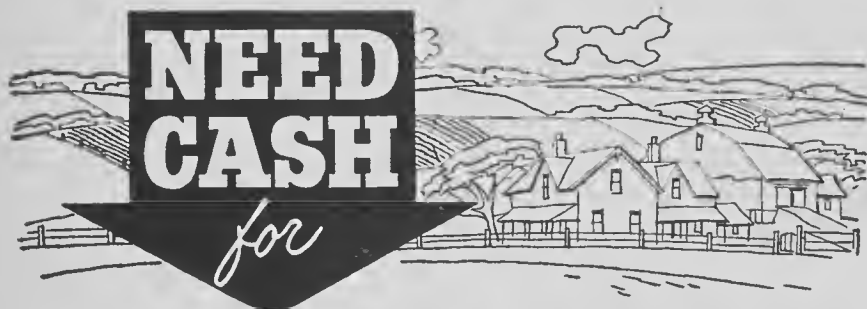
A DIFFERENT BEAUTY... BP has added something *extra* to the ordinary square butt shingle—and thus evolved the extraordinary **ROOFMASTER**. Here's how... First, a lane of dark-coloured granules is incorporated in the underlay surface to form an eye-appealing, continuous *shadow-band*. Then an **EXTRA LAYER** of asphalt and rock granules is built-up on the "finished" shingle to create a unique *grained pattern*. The exclusive shadow band and the grained pattern transform the standard shingle into one that has a *different*, unprecedented beauty — the **ROOFMASTER**.

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FARM IMPLEMENTS — EQUIPMENT?

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the characteristics and requirements of the soil; and engineering endeavors designed to pump water out of the reservoir, are all under way. Pilot projects, already covering thousands of acres, are now reclaiming land, by washing the salt away with water pumped from underground. Other projects are finding out how to satisfactorily mix this salty underground water with "sweet" canal water, to supplement the normal supply. The final solution may mean the drilling of thousands of wells to tap the underground water. It may mean the relocation of hundreds of miles of canals. It will certainly mean educating the cultivators how to use new irrigation techniques. It all adds up to a task of colossal size, but if hungry mouths are to be fed, and if hungry minds are to remain free, the effort must equal the task.

Pakistani engineers and agriculturists dream of a California of the East, while they struggle with the day-to-day problems of survival. The lowly cultivator still works long hours scratching the ground with his bullock-drawn, hooked-stick plow. He still prays to Allah that he will harvest sufficient to feed his family, and have enough left over to distribute to the poorer on feast days. The "big works" of the co-operating agencies are, in the main, beyond his ken, but he knows that they are good, and he watches with a friendly curiosity.

The poor, illiterate native of far-away places is disappearing. He is our neighbor, a neighbor with potentialities. Domination of these people has given way to mutual aid, which, in turn, must lead to mutual co-existence.

(Note: Earl Bowser is soil survey officer in Alberta for the Experimental Farms Service, Canada Department of Agriculture.—ed.)

Is a New Concept Of Farming Needed?

A NEW concept of our farm economy was called for by Charles Dana Bennett, agricultural-industrial consultant of Washington, D.C., in addressing a recent joint meeting of the Central Ontario Branch of the Agricultural Institute of Canada, and the Kiwanis Club, in Toronto.

Describing how present programs have brought agriculture to its present unfortunate position, he said: "We should work out, commodity by commodity, plans for vertical integration, all the way from the producer of farm supplies to the merchandising of the final product."

Drawing a parallel with industry, he went on "Just as industry has vertically integrated its operations from mine to electric toaster, or from forest to printed magazine, so must agriculture finally solve its principal problems."

Mr. Bennett suggested that technological advances in agriculture have been even greater and more spectacular than those in industry. Today, however, very little is known by urban folks about the essential business of producing foods and fibre. Their concept of farming is still that of the "Currier and Ives" pictures, the sentimental, horse-and-cutter, self-sufficient type of farming.

That picture is now outdated by a farming business with only one person

on the farm in the U.S., for each 18 in the city.

The speaker believed that failure to recognize the significance of change has been a major factor in bringing about the erroneous policies which have been applied politically to farming, and which have actually constituted a hoax of the people.

Before correctives can be developed, as they must be before some form of statism is applied completely to agriculture, a big educational job must be done. And the city people, as well as the farmers, must be informed of the true situation on the farm, before sensible remedies can be applied.

He referred to Farm-City Week, which he helped to develop in the United States, and which had its beginning last year, as an important step in this direction, and suggested that the same could usefully be organized in Canada.

You Can Grow African Violets, Too

AFRICAN violets are very pretty plants. The blooming period is long and attractive, a good reward for any effort to achieve it.

Many more are killed by overwatering than by being left too dry, although a happy medium can be found by carefully watching the growth of the plants. By testing the top soil between your fingers, you can get to know when it needs watering. The soil must feel moist most of the time, never wet. I let it go dry for a day or two between each watering.

I always use two fertabs dissolved in a quart of water. The African violet pots that have a bowl beneath for water, and a wick that goes from the soil through the pot to the water are very satisfactory.

I do not use fertabs when the plants have almost finished blooming. The plants then quit blooming altogether for a few months, and when they start blooming again, the blooms will be large and vigorous. Mine last spring were like a big bouquet of violets, with a fringe of leaves all around.

It is very easy to start plants from leaves. I always have good luck starting leaves this way: I take a fresh leaf and leave not more than two inches of stem. Use any leaf except the very small ones in the center, or the very oldest ones on the rim of the pot. Plant right away in a potted mixture of sand and black loam, leafmold, or any good porous soil, about three-quarters to one inch deep. The little plants come up from the tip of the stem, and if planted too deep, they either will not come through, or will be very weak and spindly. They will take about two months to come up, so don't be in a rush to look "down under" to see what they are doing.

When your little plants are up and strong, you may cut the old leaf away. Always keep turning the pots around, if you want a well-balanced, good-looking plant.

I keep my violets on a north and east windowsill. They don't like the strong sun, but they do want a good strong light at all times. — Mrs. H. Rodier, Sask.

What about Propane Tractors?

Some users believe that L.P.G. models give them more power for less money

by C. V. FAULKNER

FACED with a declining income, the farmer is taking a long look at anything which shows promise of reducing production costs. In Alberta and Saskatchewan, there has been renewed interest in propane-fuelled farm machinery, principally tractors.

Although propane, or liquid petroleum gas (L.P.G.) models have been carried by most dealers since 1950, sales have never been very heavy. The chief reasons for this have been the special storage equipment needed for the fuel, plus the fuel cost and availability. But these three factors have now changed so that the situation can be re-examined. Owners of L.P.G. tractors queried by The Country Guide are well satisfied with their machines—several, in fact, are ordering additional propane models this year.

Liquid petroleum gas, or propane, is a by-product of the oil industry, where production is heaviest in the summer months. For every ten gallons of gasoline made, two gallons of propane are produced. A slight change in the process could double the propane fraction, if a large summer market could be found for the gas so that great quantities wouldn't have to be stored.

At present, the gas is chiefly used for cooking and heating, with the heaviest drain on supplies in the winter months, when production is lowest. Even under these conditions, however, we were unable to find anyone with a gas contract who had suffered because of a lack of supply. As an Alberta government fuel official said: "With new wells coming in all the time, and the oil industry growing by leaps and bounds, it's hard to imagine any shortage in future propane supplies."

One of the main objections heard against propane-fuelled tractors is that expensive storage tanks are needed to maintain a supply of fuel on the farm. At least one major fuel supplier now offers a tank-lease arrangement for Alberta farmers that puts a 1,000-gallon tank on the farm for 99 years, the firm to keep the equipment painted and in good repair during this period, as well as providing a guar-

antee against leakage loss. Under this agreement, tank rental for the full period is \$485, payable over four years, interest-free, with a 20 per cent discount for cash. In Saskatchewan, the same type of deal is available, but the rental charge is somewhat less.

FUEL storage costs are not confined to propane-powered machines. Large farm operations using gasoline or diesel models generally require storage tanks and pumps, and smaller farms have a certain amount of capital tied up in fuel drums. On the other hand, most farmers with L.P.G. tractors also use propane for heating and cooking, so that storage equipment costs shouldn't be charged solely against tractor operation.

What about fuel cost? Depending on the locality, this ranges from 13 to 18 cents a gallon, or about six to seven cents below the price of farm-delivered gasoline, and two to three cents per gallon cheaper than diesel oil. Most experts agree that at this level propane fuel becomes an economical proposition.

The 1954 propane bill of Adialard Corbiell, near Cluny, Alberta, was \$652.44. This covers operation of a 42 h.p. (drawbar rating) L.P.G. tractor for 1,000 hours, plus one year's fuel for a propane cooking range, fireplace, furnace, hot water tank, and chicken brooder. Adialard's 1955 fuel bill increased to \$707.88 when he added a propane-fuelled, self-propelled combine to his farm equipment. Incidentally, although results of Nebraska machinery tests indicate that propane tractors in this h.p. range generally burn about 3.6 gallons of fuel an hour, as compared with 2.0 to 3.0 gallons for a similar gasoline model, Corbiell says he's been getting by on 1.7 to 2.0 gallons an hour, which is far below the average. Experiments at the University of Alberta in 1951 showed L.P.G. tractors as using one-tenth more fuel per hour than gasoline models, but developing from 1.5 to 2.0 more horsepower per gallon.

D. C. Eddy, Froude, Sask., also claims 2.0 gallons an hour on a factory-made propane model, and Doug Ray



Things look bright to Murray Dwan

As a professional photographer, Murray Dwan is glad he can capitalize on all the modern advances in his chosen field.

"Today's demand for more and better photography—especially in colour—keeps us on our toes," says Mr. Dwan. "But we're well equipped to meet it, thanks to recent developments like electronic flash, faster films and more versatile cameras."

As a family man, Mr. Dwan also benefits by the progress which has been made in another field—*life insurance*. Policies today are *more flexible* than ever before. As a result, each family can now have a security plan that fits its own special needs more effectively—and can prepare for future changes in those needs.

Modern times have also brought the advantages of *group insurance* protection on a greatly broadened scale. Moreover, many restrictions on obtaining life insurance have been removed. And, life underwriters are better trained, better able to help people make the best use of their life insurance dollars.

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L-156C



[Guide photo

Adialard Corbiell, Cluny, Alberta, with his 42 h.p. propane tractor, which is in its fourth year of service, and has only needed some new spark plugs.

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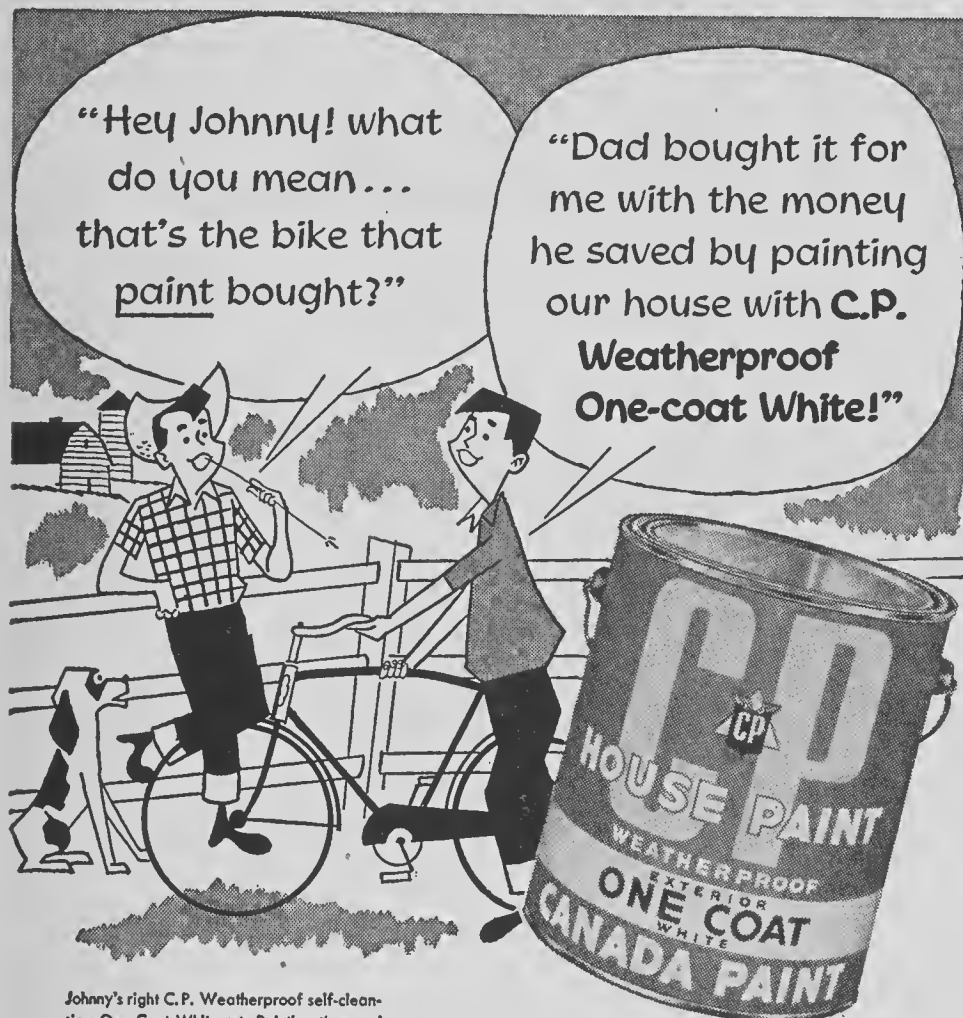
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of Carievale, Sask., rates his 39 h.p. factory machine as being as economical as a diesel, and more economical than a gasoline model. Tom Grandy of Oxbow, Sask., who has both a converted, and a factory-made propane tractor, finds that even the converted machine gives more power than when it ran on gasoline. However, most authorities agree that not all tractors lend themselves to conversion, and that more power and efficiency is obtained from a machine especially designed to burn propane.

Queried on costs, Grandy had this to say: "I find my propane machines better than gasoline, and almost as good as diesel models. When you consider original costs—a propane machine costs about \$250 more than a similar gasoline tractor, and about \$400 less than a diesel machine—as well as the saving on oil and oil filters, and the greatly reduced engine wear, I think propane machines can compete favorably with diesels."

Grandy's point about reduced engine wear was borne out by all owners and dealers queried. A large tractor repair depot in Regina reports a 50 per cent reduction in servicing on propane models, because of the dry burning qualities of this fuel. Burning either gasoline or diesel oil leaves gritty carbon deposits in the combustion chamber, which increases cylinder and piston wear. These fuels also form various sulphur compounds that dilute lubricating oil. On the other hand, when propane is used as a motor fuel it is completely burned in combustion, so that L.P.G. engines generally need a valve job only every three or four years, instead of once a year.

C. Rothenbach of Wrentham, Alberta, with a 55 h.p. L.P.G. machine in use 500 hours a year, changes oil at the start of each season, and his oil filter only once during the season. His oil stays clear all the time. This has been the experience of several other operators contacted, although tractor dealers don't recommend that their machines be run too long without an oil change. They estimate that a gasoline tractor uses a quart of lube oil a day, and a propane model about one pint a day. Over the years, savings in repair costs and lube oil purchases would amount to quite a sum.

WHEN asked about cold weather starting, most operators agreed that L.P.G. tractors don't start easily when temperatures are low, and that a block heater is necessary, unless the machine is kept in a heated shed. However, dealers claim that a properly adjusted propane tractor starts just as easily as any other model; and point out that block heaters should be standard equipment for all types of machines used in severe weather.

Another objection often voiced against propane tractors is that refuelling requires special pumps and hoses to withstand the high pressure involved. Actually, no refuelling pumps are needed at all, because the fuel is under constant pressure in the storage tank, and will flow to another container, either as gas or liquid, as soon as the pressure is relieved.

What does all this add up to in dollars and cents? Under present conditions, the annual fuel cost for a propane tractor would appear to be less than that of a similar gasoline ma-

chine, and about equal to that of a diesel model. By developing more horsepower per gallon, the propane machine should also do more work. In both repairs and lubricating oil saved, the L.P.G. tractor should represent a real saving, amounting to at least 50 per cent of the average costs incurred by other models. On the other hand, the purchase price of a propane machine would be about \$250 more than that of a gasoline model, and some \$400 less than that of a diesel tractor of comparable size. V

Blueberries for Nova Scotia Farms

by D. I. SCOTNEY

AN experiment designed to show local farmers and other lot owners that blueberries can be profitably grown on their own land has recently been successfully completed in Nova Scotia.

The two-year program was sponsored by the Provincial Department of Lands and Forests, and aimed to show what can be done to increase the yield of blueberries, and at the same time produce a maggot-free berry. It was climaxed when five tons of blueberries were picked on the six-acre experimental plot at East Kemptville, Yarmouth County. This would make 8,000 quarts of berries, and with the current price at 39 cents a quart, the retail value would be \$3,120.

The experimental plot was situated on a portion of a 60-acre square of land owned by the Department, and was the first experiment of its kind ever to be conducted in western Nova Scotia. The land was cleared of brush and burned in the spring of 1954, and as soon as the berries started to turn blue, the area was dusted. This operation was repeated several times, seven days apart. The berries were tested before picking started and were found absolutely free of maggots.

The picking operation was completed in three days. Hand rakes were used and each picker was given a separate area, marked off by string. When a 40-pound box was filled they were taken to the cleaning machine. Here a forced draft blew dirt and leaves away, leaving the berries free to flow into another container. Until recently, picking by rake had not been permitted in Yarmouth County, and this was the first large-scale operation of its kind.

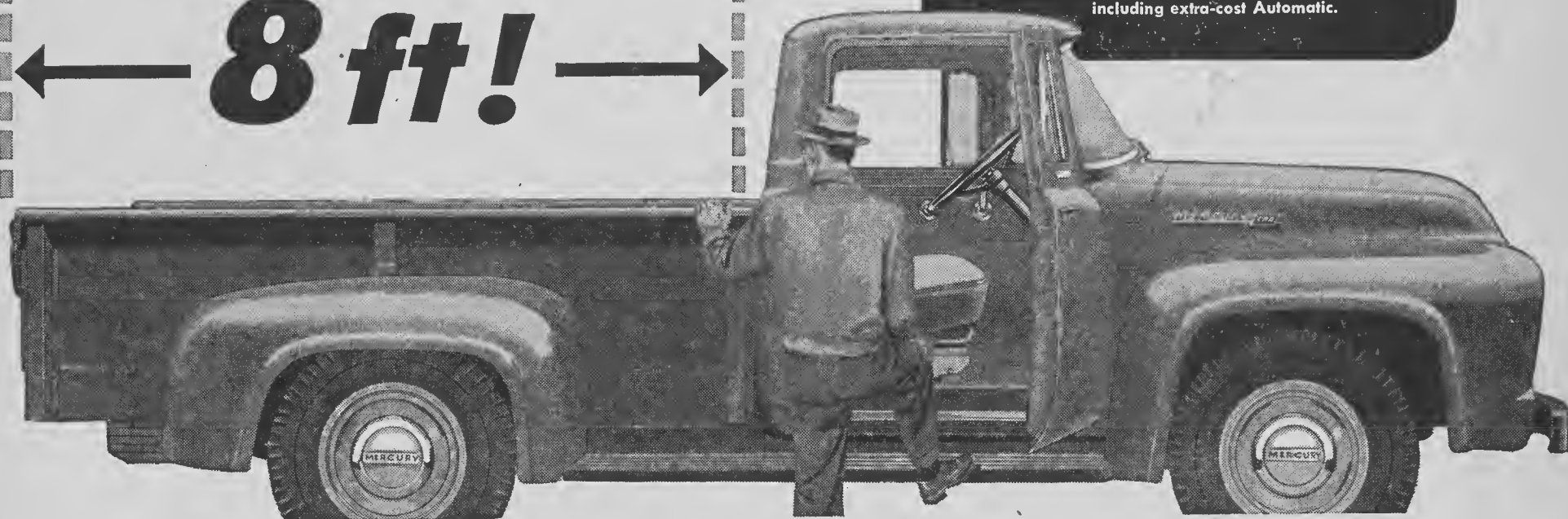
The berries have found a ready local market with the Yarmouth Ice Cream and Dairy Co. Ltd., and the recently organized Seaweed Products Ltd. The berries will be handled on the frozen food market. A certain amount of blueberries are shipped each year to Boston, for the first-class table trade, but increased production costs have raised the price to the consumer, thus cutting down on this market. Officials feel, however, that many more berries could be handled locally.

The experiment was conducted under the general direction of R. H. Burgess, provincial forester for the Department of Lands and Forests, assisted by several other government officers. All hope that the idea will catch on with local farmers to promote an industry of great value to the county's economy. V

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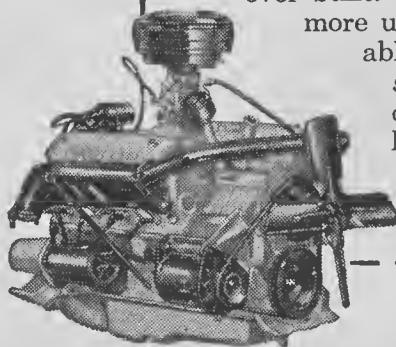
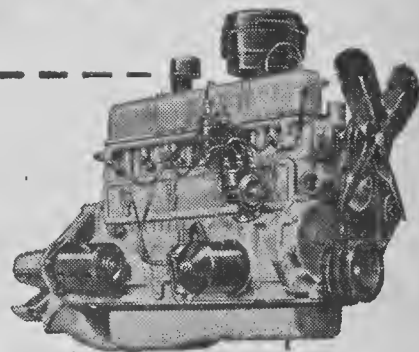
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Ask your Imperial Bank manager about a Farm Improvement Loan to help out with the purchase of first class harvest equipment. He'll be glad to give you complete information and discuss your financial requirements.

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70-6



Cooking In a Hole

This writer—who should know—says that the finest, flavored meat results from cooking as he here describes

by KERRY WOOD

IF you can dig a hole, you can cook better than the highest paid chef in all the land! You don't need a fancy grill, a sack of charcoal, or a line-up of foreign sauces, to turn out meat that has a drooly appeal for everyone. A backyard hole in the ground provides the tried and proven means to give you a chance to savour the full, fine flavor of beef, pork, lamb, poultry, fish and game, using an age-old cooking method that retains all the natural juices usually lost by modern-day cooking systems.

A family-size cooker requires a hole measuring two feet square and two feet deep. Such a hole is large enough to handle a six-pound roast, or poultry and game of comparable size. In addition to the pit, the outdoor chef needs four armfuls of firewood, a sheet of tin to cover the hole, a few old planks to place over the tin, and a shovel to scoop a six-inch layer of earth on top of planks and tin.

Timing is important. If you want a seven o'clock dinner in the evening, you'll have to get up at six a.m. and light a fire in the bottom of the cooking hole. Feed on fuel until the hole is heaped high with burning wood. Let it burn for nearly an hour, until there is a one-foot depth of red hot coals in the hole.

While the wood has been burning down to coals, the meat is prepared. Simply anoint the roast, or whatever meat you wish to cook, with generous doses of salt and pepper—favorite sauces may also be employed at this stage, though salt and pepper are the basic condiments needed to turn out a wonderful feast. Once the seasoning is applied, wrap the meat in four-ply, or layers, of heavy, waxed paper, making a thorough job of sealing in the meat. Next, take four sheets of an old newspaper, dunk them into a sinkful of water until the paper is saturated, then wrap the wet newspaper around the waxed-paper bundle.

CARRY the wrapped meat outside to the hole, when the yellow flames have died down to a glowing bed of red-hot coals. Willow is the finest cooking wood available, but any good firewood will do. If possible, a small willow log should be tossed into the pit just before placing the meat bundle in the center of the coal bed. The reason for this is to fill the pit with willow smoke, which penetrates the bundled meat and adds a marvelous flavor.

As soon as the wrapped meat is in the hole, work quickly to cover the top with the sheet of tin, and spread planks over the tin to support the weight of earth, which you then shovel on as speedily as possible. Steamy smoke will billow out from every crack, and earth must be shovelled over these cracks to tightly seal in all the smoke and heat. When not a wisp is rising from the earth-covered hole, your job is finished. Now you must be patient for 12 hours, from seven in the morning until seven in the evening.



[Kerry Wood photo]

Still wrapped in paper, the cooked meat is among hot coals in the pit.

When the waiting period has ended, have the dinner plates warmed, and potatoes and other vegetables ready to serve, before you uncover the pit. The meat bundle will be quite hot; you may even need to wear gloves to unwrap the charred newspaper and expose the oily waxed paper. When the inner wrap of waxed paper is removed, a delicious aroma steams up from the meat. No matter what cut of meat is used, or how old a fowl, or tough a rabbit, the hole-cooker will tenderize it to mouth-melting goodness, and you'll agree that it tastes better than meat cooked by any other system.

THE hole-cooker isn't a new idea, as Chinese used a similar method of preparing meat several thousand years ago. North American Indians practiced a variation by wrapping game and fish in wet clay and burying it among the campfire coals. Mexicans employed another form of it by first burning fuel in an outdoor oven, scraping out the fire and putting in the meat, then sealing the hot oven.

A Texas rancher who knew about the Mexican sealed oven experimented with earth cooking and finally became famous for his way of preparing meat by the hole-cooker. His name was B. H. Campbell; his brand was Bar-Q. The brand name was soon pronounced "Barbecue," and the rancher became famous as a man who knew how to make a haunch of tough range steer taste like heavenly ambrosia. He wrapped the meat in clean cloth, brushed on an inch-thick paste of flour and water, then gave the 10- to 20-pound roasts a final wrap of wet burlap sacking before putting them into the cooking pits.

In the years since Campbell's time, the barbecue name has been associated with open spit-cooking, grilling meat over charcoal, and cooking in fancy outdoor fireplaces. Yet the finest-flavored meat still comes from the simple, but amazingly effective, hole-in-the-ground cooker. Try it out in your own backyard and you'll start raving about the delightful flavor of barbecued meat.



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Mechanical Tree Planter

ON the barren shortgrass prairie of southern Alberta and Saskatchewan, irrigation is bringing more and more land under the plow, and settlers are marking out homesteads where only the gopher, coyote, and jack rabbit dwelt before. These families are the new pioneers of the plains, who, because of modern technology, are able to farm land which earlier waves of settlers ignored in years gone by.

The terms of settlement, however, are vastly different from those encountered by earlier pioneers. Property boundaries are firmly established, and in most cases, water, electric power, even telephone lines, are soon laid on. Generally, a community of some sort is only a few minutes away by car. But there is something which all settler groups have had in common: one of the first jobs facing them is to plant a farm shelterbelt to cut down the winds which constantly whistle across these plains.

To aid today's settlers in this task, several municipal districts have invested in mechanical tree planters, and these are lent under supervision, to any farmer making application to his agricultural service board. This spring, in Alberta alone, some two million trees have been supplied free-of-charge, from the provincial nurseries at Oliver and Brooks, and the forest nursery station at Indian Head and Sutherland, Saskatchewan. All the recipients have to do is to look after them properly, once they are in.

With several newly irrigated areas in the district, the Municipality of Taber, Alberta, had a planter especially made to service its farmers. The tractor-drawn machine could be described as a hybrid affair, patterned after others in use in Alberta and Saskatchewan. On a straight run, it will plant from 8,000 to 10,000 trees a day, or an ordinary shelterbelt around a five-acre homestead, in about two hours.

Apart from the tractor driver, two men are required on the planter to drop the trees into a furrow dug by a blade located in the center of the machine. They sit on metal seats close

to the ground, one on each side of the planter, and take their trees from boxes in front of them. A long bar runs from the rear of the machine to a tacometer device, which paces off the distance. Every time this gadget clicks, the man currently holding his tree in the furrow lets go, and tilted wheels tamp it into place.

Recently, farmers of this municipality were given a demonstration of the machine in action on the farm of Marcel Ronceray, a few miles west of Grassy Lake. When Marcel took up the half-section less than two years

ago, there was nothing in sight but prairie grass and a few pegs. He plans to raise grain and livestock under irrigation, then possibly sugar beets and canning crops later on, if he can get a grower's contract. But first he had to get busy on that all-important shelterbelt to protect his new house.

Trees for the Ronceray farm came from the Oliver and Brooks nurseries, and consisted of white spruce, lodgepole pine, and laurel leaf willow. The evergreens were from seven to nine years old, but the willow specimens were cuttings only last year. These are

intended to grow rapidly and protect the belt, while the slower-growing and longer-lived conifers are becoming established.

On hand to give visiting farmers a few facts on tree care, were Duncan Hargrave, superintendent of the Brooks Horticultural Station, and Taber District Agriculturist, Bob Simmons. Walter Cleland, field supervisor of the Agricultural Service Board, was in charge of the planter operation. Those present learned that special care is needed to ensure that the young trees, especially the evergreens, get a

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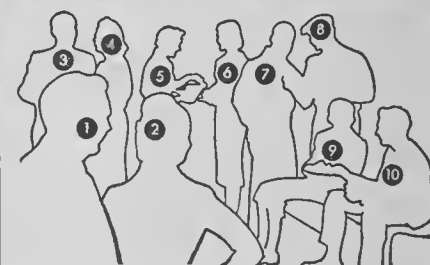
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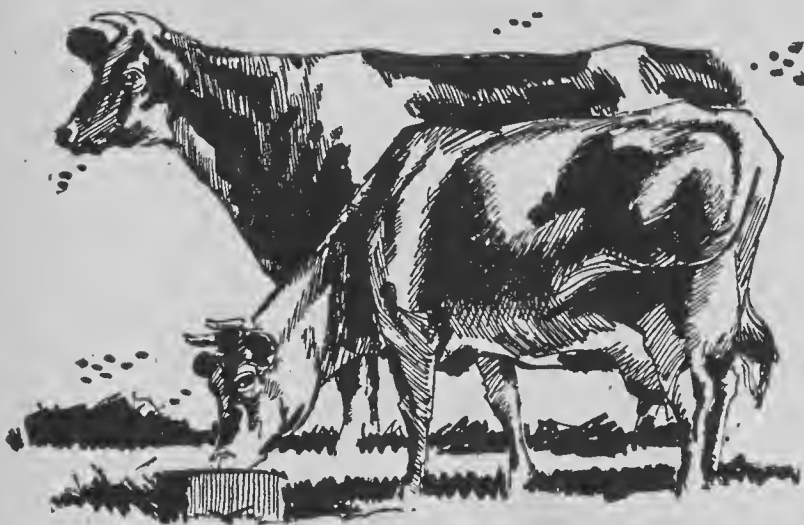
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The tree planter in action, with two men setting trees (l., Walter Cleland).

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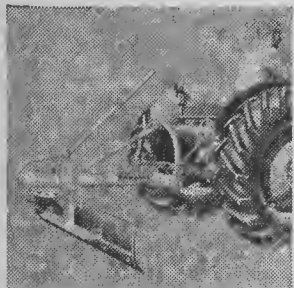
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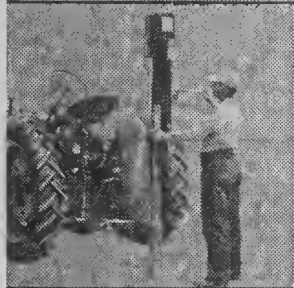
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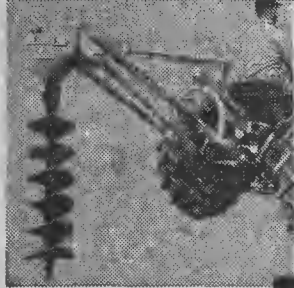
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proper start. From the very beginning they must have plenty of moisture, and be packed tightly in the soil, so that no air can get down around the roots.

Oldtimers might scoff at all this fuss and bother about planting a few trees, and think that opening up new areas these days is a pretty soft touch. But new settlers today have a few prob-

lems unheard of years ago, in the form of keen market competition, and heavy initial costs. They have to get in there and swing into fairly large-scale production as soon as possible to be able to meet these costs. The mechanical tree planting machine looks like another gadget to help them get in there faster. V

Soils Club That Bore Fruit

The agricultural representative in Simcoe County sparked it, and young farmers found it profitable

TOM ROSS, for one, is glad that Stewart L. Page, agricultural representative at Barrie, Ontario, started a Junior Soils Club in 1950.

Tom was in his 'teens, then. He was in love with the dairy cattle at home, and was keen to learn more about farming. The soils club proved just the place to do it.

It made him really aware, for the first time, that soil was the very essence of the family livelihood. In the soil, every dollar they earned had its origin. As a result, big changes were made in the farm, over the next three years.

Ten acres of land were cleared the first year, and seeded to pasture. It proved so profitable that another ten were cleared later. Thirty rods of stone fence were buried by the bulldozer they hired, as a means of narrowing the strip of land wasted by a lane.

Through the soils club, the Rosses began to use lime, and discovered that they could grow good crops of clover. They added phosphate fertilizer, where needed, and with the increasing stock they could carry, soon found themselves with more manure, to further build up the soil productivity.

Although the Club was officially disbanded after its third year, Tom encouraged by his father, is still studying the soil, trying birdsfoot trefoil and ladino pasture mixtures, and any other idea that holds promise of better results.

Since that beginning, the milking herd, which used to number 10 or 11 cows, has jumped to 19. The full herd, which used to number 25 head, has become 45 head. The cows, tested under the Dairy Herd Improvement Association Policy, are giving more milk as well.

SUPPORTED by the increasing production, the Ross farm has maintained a profitable position in today's tight farm economy. It made the difference, when Tom finally faced the decision, either to leave the farm for the city, where many of his friends

No one can expect a majority to be stirred by motives other than ignoble.—George Norman Douglas.

had already gone, or to build a life for his own family on the farm. The time came when he was ready to marry. His father, Victor Ross, was prepared to move off the farm. He had built up a small trucking business, and could turn the farm over to his son. Tom stayed on the land.

That story has been repeated in North Simcoe County in many dif-

ferent ways. It is a story of farmers finally coming to terms with the soil upon which they depend, the soil upon which they have lived for too long, without ever fully understanding its needs.

White-haired Stewart Page has been "hepped" on soils for years. He has attributed more of the farmers' troubles to the soil than most farmers would have considered fair only a few years ago. Now the tide is turning: the soil, after generations of misuse, is coming into its own again. In North Simcoe Mr. Page's Junior Soils Club was a fundamental factor in laying a sound groundwork for the change that is taking place.

To Mr. Page's thoughtful mind, understanding of the soil must be the ultimate goal of every good farmer. He has worded it in some lines that he calls "The Farmer's Quest." It could well become a creed for every farmer.

May I be honored in my calling;
Take pride in the perfection of my work;
Be a diligent and watchful guardian of the soil

And hold a personal affection
For the ways of the land. V

Thank You Mr. Nielsen

HERE is a welcome letter from a reader in Denmark, which we hope will interest you, as it did us:

"I have subscribed to The Country Guide for the past three years and find it a source of most interesting information and reading, especially as I am working a small mixed farm of approximately 30 acres. We have six cows, eight heifers and about 20 pigs plus a little poultry. Our cows produce on an average 4,500 kilos (10,000 lbs.) milk with 4.3 per cent fat per annum. They are fed on pasture during the summer months and on beets, barley straw, oil cakes and ground up barley during the winter months. The pigs are fed on barley and skimmed milk and are usually ready for the slaughterhouse at 5½ to 6 months of age. This feed is rather expensive so I am interested in reading about how other farmers feed their stock.

"With our best wishes and kindest of regards, hoping your publication will always be as interesting as it is now.—A. E. C. Nielsen, Vestermarsgaard, Orstedmark per Viby, Sjælland, Denmark.

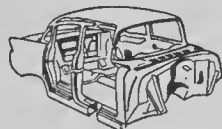
(We hope so too.—ed.) V



"SAFETY FIRSTS!"



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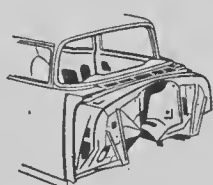
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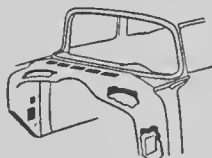


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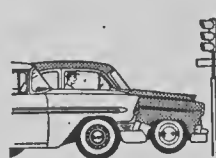
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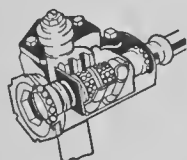


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Massive resistance to road shock—an unusually strong bulkhead arches from one side of the frame to the other between the engine and the front seat, giving extra strength and protection.



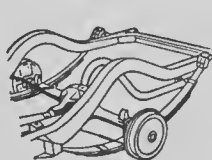
ANTI-DIVE BRAKING

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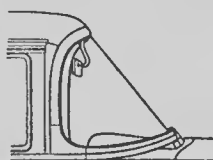
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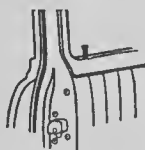


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A historic Chevrolet "first". Wrap-around rear window was another Chevrolet advance, making driving and parking very much safer.

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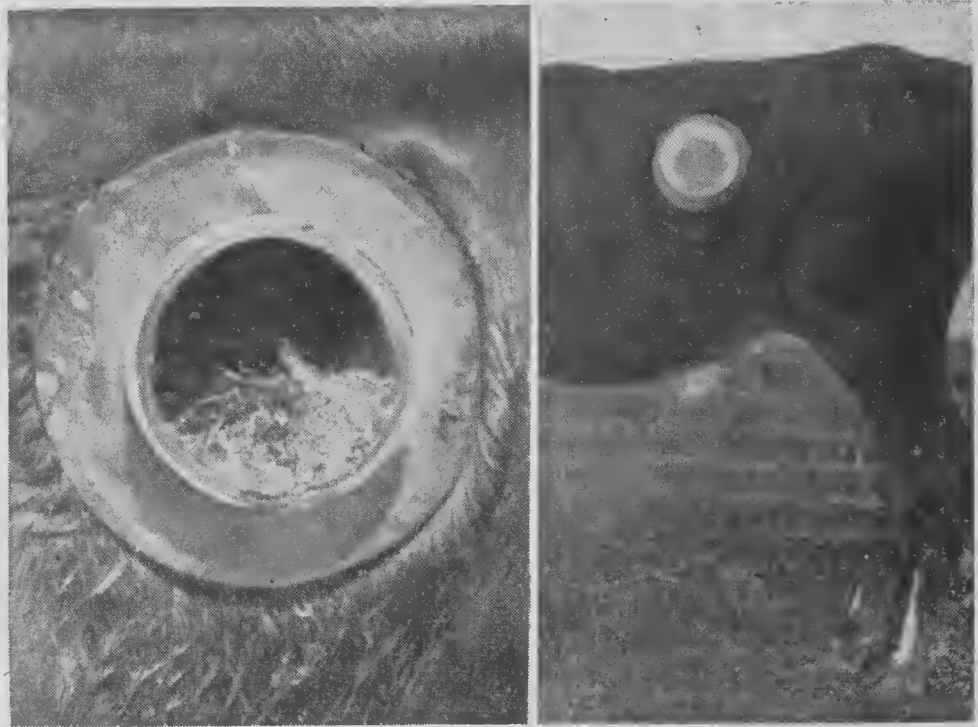
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Window in His Rumen

Photo and text by HARRY J. MILLER



DESIGNED to add greatly to the store of knowledge needed by animal doctors to diagnose and cure the ailments of prize cattle, is a plastic window inserted in the stomach of a steer.

Experiments being conducted by John A. Alford, Associate Professor of Bacteriology at the Mississippi Agricultural Experiment Station, are ex-

pected to provide invaluable information on digestion and diseases of farm animals.

At an incision precisely calculated to prevent muscle damage that would cause the hole to sag, a plastic window was inserted so the contents of the stomach can be examined at any stage of the digestive process, by withdrawal through the plastic cap.

It's Hard Now To Make a Beef Farm Pay

This young Ontario farmer uses all the ideas he can get, but finds it tough

"THERE is no substitute for a sharp pencil on a farm today." That is Clarence Hewitt's way of saying that bookkeeping is the most important job in farming. He has been struggling with figures for 11 years, trying to keep his beef cattle operation profitable, but despite that long siege of planning, changing, substituting, and searching endlessly for ways to boost income and cut costs, he still finds it tough going to show a profit at year's end.

This serious-spoken young farmer runs a 35-cow herd of beef cattle on his 100-acre farm at Beaverton, Ontario. Of course he has other land as well, for cheap summer grazing, and grows hay and grain on the home farm. He started keeping books when Art Robertson, farm management specialist at the Ontario Agricultural College, first began his work with young farmers 11 years ago. He has been at it ever since, and one of the biggest changes that have resulted from this intensive study of his costs, has been in his stabling arrangement.

The cattle winter in the partly sheltered corrals running out from the open barn. He developed his present layout by tearing the stanchions out of his old barn, and extending the building to 120' by 45'. Also, it is now divided into sections, for calves, heifers, steers, or cows, with paddocks running out from each.

The records show that he can keep his livestock numbers high, with this accommodation, without additional help, giving him a marked advantage over many beef cattlemen. In fact, the farm management people, using their own measuring stick, gave him a score of 419. The average for 25 farms was 292. In other words, he was looking after almost half as many stock again, as were the other beef men.

He scored high on another factor, too. His own livestock represented 33 per cent of his total investment on the farm. Average for the farms compared was only 15 or 20 per cent. Clarence says, "The livestock are the only products that I turn into cash, so I must have plenty of them."

The Hewitt farm has developed as a one-man enterprise. His 35 cows are away on pasture in summer. His ten sows provide some work the year round, but by hiring a little help at haying and harvest time, he can get along nicely.

His continuing attempts to lower production costs have brought some other interesting developments as well. He calls high protein hay and grass the most valuable crops on any farm. He bales two cuts of hay from about 45 acres on the home farm, cutting early, when it is rich in protein. Another ten acres is given over to pasture for animals he wishes to keep

at home; and grain is grown on the remaining 45 acres. He follows a four-year rotation—two years of hay and two years of grain.

Since grain is a costly commodity in Ontario, he plans to finish his cattle on grass. The heifers go off grass at one and one-half years, while the steers are kept for an additional year, by which time they will make over

1,100 pounds. The calves are given a little grain during their first winter, but other than that, the grain crop is grown for the hogs.

The ten sows give the Hewitt farm a comforting diversification and, he says, a better market for the grain than would the cattle. He buys pig starter for them, and later uses home-grown grains with supplements. ✓

Science And the Farm

Milk and fruit drinks—physiotherapy for livestock — rain losses — arteries harden

Enlarged markets for milk, especially during the hot summer months, are possible through the use of milk-fruit drinks. The Dutch have evolved combinations of milk and acid-fruit juices, which will keep for several days when pasteurized, or for months if sterilized. One recipe: 20 pounds sugar dissolved in 46.5 quarts fresh milk; add 23 quarts of 2.5 per cent high grade pectin solution; let stand for a few minutes, then add 19 quarts black currant juice; allow to stand ten minutes and pasteurize. For home use, try this on children, or people who do not like to drink milk: to an inch or more of prune juice in a tall tumbler, add cool, fresh milk to fill; stir gently and drink. Try, also, sweetened grape, or currant juice. ✓

West of England farmers are successfully treating cattle and pigs with electricity for some ailments, in much the same way that human beings are often treated electrically. Report has it that the milking capacity of a pure-bred Guernsey cow has been restored following acute mastitis; also a Guernsey cow with a split tendon and badly swollen hock; similarly, a sow, with litter, so damaged that veterinary treatment was regarded as almost hopeless; and another sow, off food entirely, because of an injured back and leg. Animals seem to like it. But treatment must be given by a qualified physiotherapist. Treatment stirs up soft flesh tissues, producing warmth, which speeds up healing. ✓

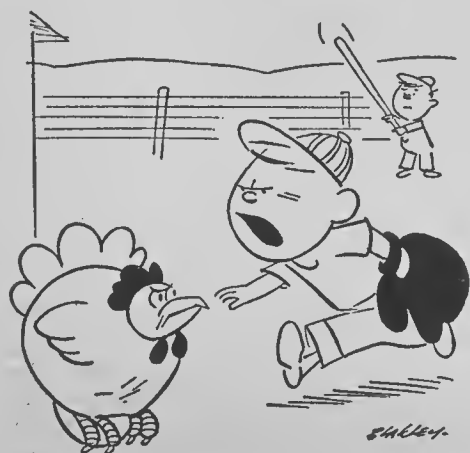
Rain falling continuously, not only leaches plant food from the soil, but also from the leaves of the plant. Michigan State University scientists used radioactive tracer materials in plants, and found that nearly three-quarters of the potash in leaves was drawn from them in four hours of simulated rain. Other elements, they found, could also be lost in rain, including nitrogen, calcium, magnesium, boron, manganese, iron and copper. Thus, continued rain may reduce the growth of plants, and require supple-

mentary fertilizer for satisfactory yields. ✓

All animals apparently suffer from hardening of the arteries, according to scientists at the University of California School of Medicine. Experimental animals, in which the typical thickening of the arteries in arteriosclerosis has been found, included dogs, cats, lions, tigers, elephants, birds, horses, cows, baboons and gorillas. It becomes worse with age in all animals. Lesions start with deterioration of the interior lining of the blood vessels, following by the deposit of mucoid substances, where deterioration has started. Fatty deposits were seldom in evidence, even late in the disease, and do not seem to be a cause of animal death, as in the case of man. ✓

Antibiotics may make it possible to keep foods such as pasteurized milk and mixed salad greens fresh much longer in grocery stores and markets, than at the present time. Minute traces of a broadrange antibiotic such as Terramycin are said to lengthen the life of pasteurized milk from two days to several weeks. Also dipping salad greens in a solution of certain antibiotics is said to keep them fresh twice as long as otherwise and adding ten parts of Terramycin to a million parts of slush ice is also reported to lengthen the storage life of poultry from one to two weeks. Australia has recently inaugurated a large-scale experiment involving treatment of Australian meat intended for shipment to Britain with antibiotics, to maintain its freshness. ✓

Deformities in young rats at the University of California have been produced after as little as two days of severe dietary deficiency during a critical period of pregnancy. Deformities similar to those occurring in humans, may effect the heart, blood vessels, bones, brain, eyes, kidneys and sex organs. Each infant rat born later, usually showed one or more deformities, such as cleft pallet, hairlip, clubfoot, and missing bones or fingers, or excess of fingers and toes. Most spectacular deformities followed diets containing deficiencies of folic acid, one of the B vitamins, though deformities also followed four-day deficiencies of riboflavin, and pantothenic acid. A two-day deficiency in rats is equal to one to two weeks of human pregnancy. Moreover, there is no evidence that human beings encounter the same severe dietary deficiencies as were produced in the experimental rats. Curiously enough, the mother rats remained in good health. ✓



"Okay, off the ball, off the ball!"

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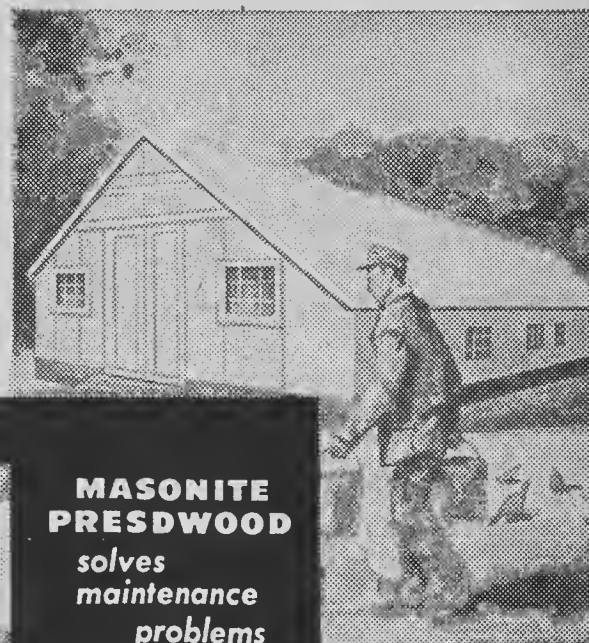
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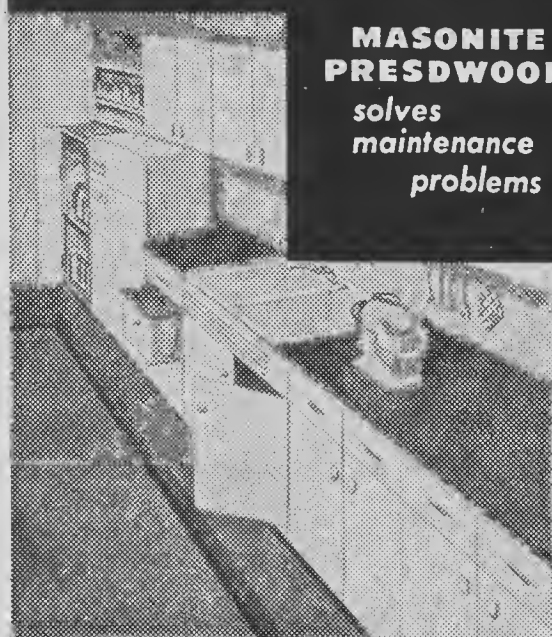
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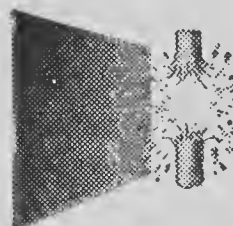
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REGINA

SASK.

Summer Storm

Continued from page 12

"Don't be silly, Karl," said Lexy sharply. "He never said any such thing."

"He sure did! Can you think I'd make up such words? Don't even know what they mean."

"You shouldn't have been in town yesterday, anyhow," said Anna, disturbed to see the flush of annoyance on Lexy's face.

Karl leaned forward and whispered into his wife's ear, his mischievous eyes on Lexy. Anna pushed him back and got up to serve the teacher's breakfast.

"He won't give me a moment's peace, Lexy. He wants us to just up and go to the lake. I've told him over and over that Mama, Papa, Marlene and Herman are coming tomorrow, for the day. I have to bake and clean. I haven't a thing done."

"You'd like to go, eh, school mum?" coaxed Karl. "All your loving friends off on a picnic there. They'd be sure glad to see you."

Lexy gave a short laugh. "I made it very clear to my loving friends that I have too much work to do today without going off on any picnic."

"We can't go, Karl, and that's that!" said Anna. "Lexy has her work and I have mine. It's all very well for you. You've had such good weather this month, that you've got all the seed in, but there are plenty other things you can do. You are way behind with chores. That woodbox is not only empty, it's falling apart at the seams. It makes more work than a dozen kids. All the chips fall out as soon as they're put in, which isn't often, unless I do it myself. And there's that broken window in the front room, and I want you to clean up the back yard before Mama and Papa sees—"

"Okay, okay! I give up! No lake today!" Karl was still grinning but there was a darker tinge to his sunburn as he rose from the table. "Thought you might like a change. Didn't expect to get a jail sentence out of the idea." He kicked back his chair, picked up a cotton baseball cap and slammed the screen door behind him.

There was a short silence after he left. Then the baby gave a shout of protest as Lexy stopped brushing his hair and sat down to breakfast. Anna silenced him with a small piece of toast spread with wild strawberry jam. She pushed back the damp hair from her forehead with the crook of her arm, and poured herself another cup of coffee.

"Now he's mad," she sighed. "I had a good talk with him last night after he got back from town. I tried to get it through his head that he leaves me with too much outside work to do. He got sore and grumbled about having to do everything himself. I know it would be easier if he had a hired man around, but he finds enough time to go into town for a beer and some pool every week. I never seem to get off the place."

"It's a shame," sympathized Lexy.

"He says I'm getting to be a regular nagger." Anna looked resentfully at a fly buzzing behind the spotless white window curtains. She rose and made short work of it.

"I think you are very patient," said Lexy. "I can't get over how you man-

age without a washing machine or a vacuum cleaner—no electricity or plumbing—and having to use wood for cooking! You really are wonderful, Anna!"

Baby Karl caught his mother's eye, screwed up his face and laughed. Anna, mollified by Lexy's praise, picked him up and hugged him.

"It's a wonder I bother with you, young fellow, you look so much like your dad. I'm afraid I'll lead a sorry life of it when you are old enough to join him in tormenting me."

"Train him while he is young," said Lexy, trying to find interest in Anna's golden hot cakes and crisp bacon.

Anna sighed as she laughed. "I thought I caught his daddy young enough. Karl was only nineteen when we were married. There's one thing about him though: I can't stay long mad at him. Perhaps that's why I don't get anywheres with him."

A fleeting thought came to Lexy that Karl, too, even as she, might wish he had not jumped into the adult world so quickly. A married man with wife and child, and so young he could not always keep to the pattern. She shook away the thought impatiently. He had chosen such a position. He should act accordingly.

The heat of the kitchen closed in, smothering her like a blanket. She pushed back her half-finished breakfast and listlessly gathered a few bundles of test papers under her arm.

"Go out under the crabapple trees," suggested Anna. "You'll get some shade there."

"Let me help with the dishes first," offered Lexy.

"You can, at noon. I'm going to get right into the swing of things now. I've wasted enough time." Anna began with vigorous frenzy to clear the table. Lexy knew she would be better out of the way.

OUTSIDE, she gasped as the hot air caught in her throat. Heavy clouds were skirting the horizon of Karl's wheat field. The sun, blurred at its edges, poured relentless heat from the milky haze of the sky. Lexy settled herself on the lumpy ground under the fruit trees, and forced herself to open the bundle of arithmetic papers.

The sound of lazy chickens clucking in the yard came to her, and an unhappy cow moored from the pasture. Karl kept out of sight. The baby moved on unsteady legs in and out of the house. Anna lost patience and finally tied him to the clothesline with a long harness. Intermittently, the baby found interest in a small pail and the dirt under the line, but most of his time was spent in crying at the indignity of his detention.

Lexy, as she marked the papers, had similar feelings of frustration. Some of the questions, showed signs of intelligent attack. Others filled her with despair. Surely Wally Gribbs had absorbed some arithmetic during the year. How could he sit, day after day, with a semblance of concentration and still attempt to subtract a larger number from a smaller in a simple problem?

Her thoughts wandered and like a homing pigeon returned to the conversation at breakfast. Had the doctor been making fun of her to Karl? "The impetuous and dedicated Miss O'Conner!" Anger enveloped her. Why not? Didn't this isolated district need a bit

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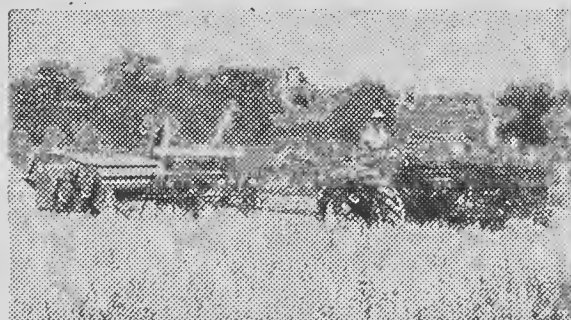
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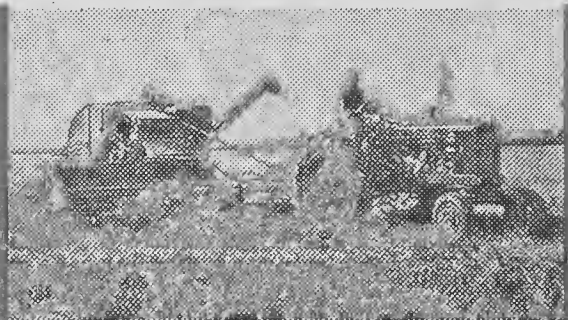
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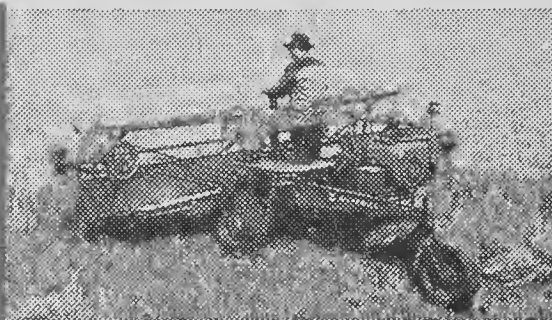
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WINNIPEG CANADA

of dedication from somebody? She'd organized a young people's group for the teen-agers. She'd surely improved conditions at the school. And now, if she were still interested in the health and welfare of such families as the Smythes and Kellys, did her interest have to be held up to ridicule? The state of Terry Kelly's ears alone would make any teacher turn pale!

The kindly face of the overworked doctor in Horse Shoe Creek rose before her. Hadn't he made dirt and poor diet his enemies too? She sighed and added the few scattered marks on Wally's paper. Her back ached. The clouds were thickening. The day had become tense and sullen. She rose and went into the kitchen for a drink of water. The pail was missing. Looking through the window, she could see Anna struggling up the hill from the creek with water slopping over the sides of the two pails she carried.

And the woodbox was empty! In a rage at Anna's heavy schedule and at her own frustrating day, Lexy rushed out to the woodpile and soon the chips were flying.

"Lexy!" protested Anna. "Get away from that woodpile!" She put the pails of water down on the porch and came over beside her. "You'll put an eye out or chop off a finger or something."

"Somebody's got to get in the wood, and it isn't going to be you today." Lexy blew a stray lock of hair from her hot face and glared toward the barn.

At that moment Karl appeared from around the corner of the woodshed, a newly sharpened axe in his hand. Lexy caught her lower lip between her teeth. He couldn't help but have heard her words. One look at their hostile faces and he tossed the axe on the woodpile.

"Use this one!" he said, his voice rough with anger. He turned and strode off to the barn.

"Karl!" screamed Anna. "Don't you dare go to town again today! You promised me!" She rushed after him.

Lexy winced at this unnatural performance. All through the year Anna had maintained her dignity in dealing with Karl, and he, for all his irrepresible teasing, had never been disagreeable or unkind, to her or Lexy.

Whatever Anna had to say to Karl in the barn seemed to have made no difference. He came out on his horse

and galloped off. Anna returned to the house. It was the first time that Lexy had ever seen her cry.

"He says I listen to you too much, and that he's not going to stand it any longer." She collapsed on the back porch. "Honest, I don't know what's gotten into him. He never used to be like this. I don't want to be too hard on him."

Lexy, aghast at the mention of herself in the quarrel, sat down beside her.

"Does Karl really think I'm interfering? I don't mean to. I like Karl, but—but being with you so much, I see things from your viewpoint. I don't want him mad at me."

Anna blew her nose. "Don't you go and feel bad. I don't know what I'd have done without you this past year. He's the one to blame—going off like that, like a ten year old. I could shake him. And me with all this work to do today!"

"Never mind," said Lexy contritely, "I'll help all I can. It's too hot for marking papers."

The day moved on. The girls worked together and tried to have some fun out of it, but the unnatural heat and the thought of Karl's black mood hung over them spoiling the companionship.

"I wish it would storm," cried Anna suddenly, as she pushed three apple pies into the oven and slammed the door shut. "There is something dreadful about this heat coming at us from everywhere. Those wicked clouds just crouch down at the edge of things waiting to pounce on us."

Lexy glanced at Anna uneasily, she did not sound like her usual self at all. After a quick lunch, the baby was put to bed for a nap. Anna kept up her frenzied work. During the afternoon she cleaned the house, while Lexy worked on school forms. They watched the sky. It would seem as if Anna's wish might come true. The clouds swirled high, edged now with purple spirals. Yet there was still no movement of air about the farmhouse.

AFTER supper, Anna tied the baby to the clothesline again and went with Lexy to the barn. Lexy had been taught to milk during the winter when Karl had been off in the woods getting a year's supply of fuel. She regretted it now. The animal smell mingling with the dank heat of the

Farm Comment



"I certainly will vote Liberal. At least Jimmy Gardiner didn't put a support price under poultry meat."

barn was overpowering. It was hard to believe it was really she who found herself in such a place; with the foreign sounds of the cattle, and beside her, the silent Anna boiling inwardly at the thought of her absent husband.

"It is going to storm, after all," said Anna, as she moved slowly toward the house. "Mama and Papa may not get here tomorrow. I don't care. I don't care about anything, so long as we get rid of this awful heat."

"You have enough baking done to last us all week." Lexy meant it for comfort. Anna's face was empty of emotion. She sighed and nodded, as she poured the milk into the separator. When the machine began to whirr, Lexy went outside again to bring in Karl.

The harness trailed from the clothesline. The baby was gone.

Lexy rushed in for Anna. The separator whined to a halt as the girls stared at each other. The creek! Without words, they ran down the slope. The creek was shallow, but the current flowed rapidly. There was no sign of the baby. In the stillness before a storm, their frantic eyes searched the terrifying stretch of land and woods that surrounded them.

The cllop, cllop of a horse on the road brought them into action. They must get help!

It was Karl, looking sheepish and still defiant.

"Karl!" The desperate cry and the anguish in Anna's face brought him down from the horse. He caught her as she flung herself against him.

"The baby's lost!"

"How long?" Fright leaped up in his eyes and his jaw tightened.

"We don't know. He was tied to the clothesline while we milked."

"Don't look like that, Anna!" His face seemed to crumple. Again came the tightening of his jaw: "We'll find him. We'll find him, won't we, school mum?"

Lexy nodded dumbly.

"Listen, now," he said, his voice hoarse with the strain of emotion. "We look for him first by ourselves."

"Karl, it will storm any minute!" cried Anna, her wild eyes raised to the threatening sky.

"I know." He held her face toward his. "That's why we got to look first before we try to get help. He's just off a little ways. You know kids! They lie down and go to sleep anywhere. We'll find him before the storm breaks. In twenty minutes I'll go for help, Anna, if we haven't found him. You take the house and barn. Look in every corner. I'll go ride along the woods." His desperate eyes looked at Lexy.

"You go to the west pasture, eh?" He flung himself on his horse and galloped off to the north. Anna gave a gasping cry and rushed toward the house.

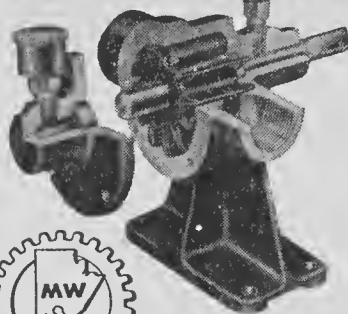
Lexy ran toward the pasture, tears wetting her face. The thought of the baby out alone in the coming night and the storm had to be pushed far back in her mind. Little Karl was her plaything during the presupper hours weekly, and often her care at the weekends. A deep tenderness welled up in her and enveloping the baby, Anna and Karl. Karl? Had she ever been really angry at him—the boy who was not yet a man? How had she presumed to take sides against him in a quarrel between him and his wife?

THE meadow and wood smells rose and their sweetness caught in her aching throat as she stumbled, and hurried on. How many other women and men searched for their babies this night? Searched as she and Anna and Karl were searching now? She pushed back panic at the thought. Little Karl—this one lost baby!—Surely he was somewhere near! Just to know that he could not be far away—if they found him quickly, he would be all right!—there was hope!

When she saw the baby standing near a clump of bushes staring at her with solemn eyes, she could not believe her eyes. Surely she had found him too soon. It had been too easy. There was an eerie quality about the tiny child in the midst of the wide

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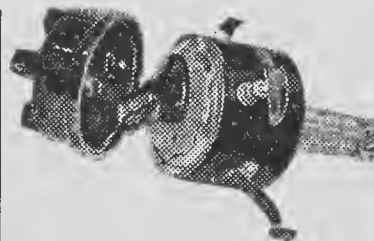
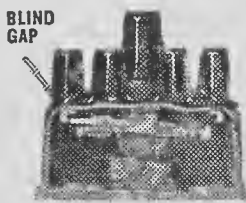
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pasture, the dark wood beyond, and the suspended storm.

"Fler!" said the baby, holding out a buttercup.

"Oh, you naughty boy!" cried Lexy, snatching him up and covering his round head and bare shoulder with kisses. "You naughty, naughty boy! What you have done to your poor mummy!"

She could not bear the thought that Anna and Karl still searched. She tossed the laughing child behind on her back, and went running in galloping motion back toward the farm, shouting, "Here we come! Here we come, everybody!" Her voice grew hoarse.

Karl and Anna heard. They rushed toward her. The wind too rushed over the fields and out of the woods,

drowning the sound of their hysterical joyous laughter as they met.

Anna and the baby were within the tight circle of Karl's arms. He stood, proud and strong, the lines of his jaw taut, and his eyes deep and steady above the heads of his wife and child.

Lexy stood to one side. Suddenly in her happiness for them, she felt lost and bewildered. They had forgotten her! Hadn't she found the baby? Didn't they realize that she loved him too? Shame followed the thought. How could she expect at such a time to push into that inner circle? Her lip caught between her teeth. Was that what she had been trying to do?

She moved quickly ahead, leaving the Neilsons behind. The wind could no longer be ignored. As the rain

came slashing down they all four reached the kitchen door together.

Anna sat with her hands slack in her lap. Her eyes followed Karl who, with the baby riding his shoulder, went about from room to room, shutting out the storm.

"School mum's some use around here after all, eh, Anna?" he grinned. "She can chop in my woodpile any day!"

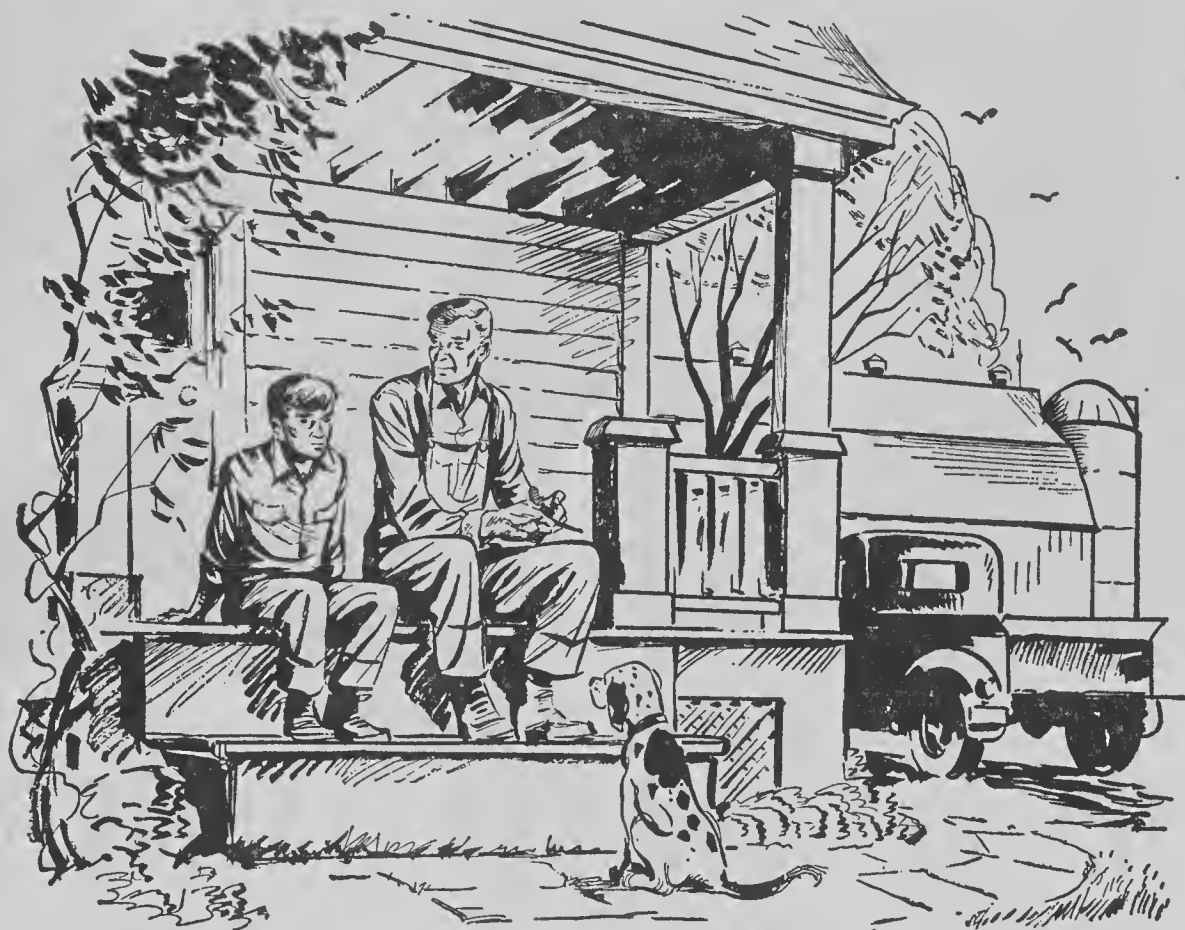
"You fill your own woodbox," said Lexy, laughing. His deep chuckle was followed by her sigh of relief. It was good to be friends again.

The day was over. In her bed, Lexy listened to the wind and the rain beat with savage force against the roof, but inside the old house was peace and tenderness. One small child had been lost but was now snug in bed.

She moved her cheek on the pillow. A cool breeze blew in from the window. What had been fretting her that morning? Drowsily, she tried to remember. The Kellys? The Kellys were surrounded by love, and safe too, in their dishevelled beds.

"I'll write a nice note to Mrs. Kelly on Monday morning about something or other," she promised herself.

The storm stopped and the wind blew fresh and strong. There came a break in the clouds. Lexy did not see the moonlight that flooded the night and moved softly into her room. She had fallen asleep. ✓



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Grass for Silage And Conservation

THE Iversons of North Battleford—George and son Clarence—are turning to grass and hay with a vengeance now. They tried it a few years ago, but with no machinery then to take the bull work from it, were forced to give it up. Now, with forage harvesters and surface silos to lighten the job, they are making good use of succulent forage for winter steer feeding.

It was five years ago that they started back into the grass, by purchasing their forage harvester and scooping out a trench silo. The hard-packed silage was difficult to remove for winter feeding, so the next year they fenced in a surface silo where they now cure the feed. Last year, they had 60 acres of sweet clover, alfalfa and brome and crested wheat-grass seeded down on the home farm for silage. It has paid off so well that they are planning to expand this acreage. They are gearing an operation of grass and grain farming to handle about 100 steers. By rotating the crops they plan to move the grass through their entire farm, to build the soil and make possible three or four years of cropping before returning to grass. Further, they hope to almost eliminate fallow land from the farm.

To handle the silage, the Iversons bought a running gear and built a rack on it. They designed a false-front for the rack, and now they haul the silage to the silo, hitch a tractor to the chains attached to the false front, and dump the grass right out onto the pack.

To further build up the farm, they have begun to try fertilizers; and since they get a spotty response to it, are running fertilizer trials across their fields. Their land runs from a sandy loam to a loam, a soil that usually requires some help to maintain yields. ✓

The Countrywoman

by AMY J. ROE

Summer Holidays

OUR summer seems so very short—so quick in its going! Its coming is indeed welcome, after the long sombre winter and the boisterous, reluctant spring. For us, living in a northern clime, there is a special joy in this season, when we can move about in the great out-of-doors to enjoy the sun and the air without the hindrance of extra wraps. We gladly adjust our living arrangements and thinking in order to enjoy it to the full.

In the main, city and townfolk take their holidays during July and August. In industry, offices, shops, laboratories, institutions and classrooms, arrangements are made so as to allow workers to enjoy a summer vacation. In many of the larger centers it is now a popular practice for allied trades—such as the building trades—to agree on a specified fortnight as a fitting time for releasing workers so that they, with their families, may enjoy a pleasant summer outing.

During these two months particularly, there is a great and continuous trek to summer camps, fishing haunts, lakeside or mountain resorts and other recreation spots. Highways are jammed with cars of tourists and holiday-seekers. Some, it is true, are heading for distant cities but in the main those who travel thus, are seeking some quiet restful spot beside a lake, or mountain, where they may enjoy lazy days in a natural country setting.

It is becoming more and more difficult to find a conveniently located, unclaimed spot in an attractive setting, which offers a prospect of peace and quiet—without too great an expenditure of comfort, time and money. Fortunately our governments, national and provincial, have long foreseen this development and have taken necessary steps and reserved certain natural beauty spots and surrounding parkland and lakeshore areas as public "parks" or playgrounds, and have under long-term leases permitted the erection of summer cottages, private camps and the required service facilities. As time goes on we will become more conscious of the wisdom, and more and more grateful for the opportunities offered by these public recreation areas. They are well supervised and maintained. In recent years in some provinces, firm measures have been taken to have inspection and licensing of motels, tourist inns and paying-guest camps in order to ensure for tourists, holidayers and other travellers, proper sanitary arrangements, quality of food and fair dealing in type of accommodation and prices charged. All of which tends to protect and enhance the reputation of Canadian hospitality. ✓

Work and Recreation

IN the country, summer is quite another matter. Some unusually delayed spring operations or exceptionally early harvest work may possibly spill over into the fringes of July or August. Much, of course, depends upon the type of farming carried on, be it: dairy, grain, ranch, mixed, market garden, poultry or other special products type. The use of modern machinery and the coming of electrical power has taken much of the heavy physical work out of farming. But there still remain many operations requiring daily attendance and oversight, much which must be done by hand or on foot by workers.

Long days of sunlight usually means long hours of work for all concerned, particularly when machines are put to use. Everyone concerned gets plenty of fresh air and more than a fair share of the sun's direct rays, and is ready for a quiet spell before turning in for a night's sleep, in order to be ready for the next day's work. In other words, the farmer, his wife, children and helpers are literally "tied to the place" for the summer and have little

Where we live and the kind of work we do, largely determines our attitude toward summer and vacation plans

inclination or desire to be away from home for any considerable length of time.

In between major bursts of farm activity, there come certain periods of waiting—waiting perhaps, for favorable weather, waiting for crops to mature. These often coincide with the peak of summer's heat. At such times the members of the farm family seek recreation near home: going to local picnics, attending a farm field day at some not-too-distant experimental farm, sports events or dances. More of the young people are home from school and there may be special visitors from the city or some distant point. Thanks to the motor car, the time involved is not too great for taking in a special event, a movie in town, a sightseeing jaunt or a short trip to a lakeside resort. There is usually frequent visiting around to see how neighbors' crops are coming on and for comparing field experiences. In these small and enjoyable ways the monotony of days of hard work is relieved and recalled later as pleasant features of summer.

In his occupation the farmer is an individualist. He may be an employer but he is also a worker and quite frequently all members of the family are involved in his enterprise. Doubtless there are some farms where children do work too heavy for them or work for too long hours, who are kept at farm work when they should be at school. But surely there is less of this than in the pioneer days, and less and less as frontier areas develop into real settlements.

But what of holidays for the farm family? We asked for readers' letters on the subject of An Enjoyable Holiday. The response was meager and disappointing. Are favorite holiday plans "individual" or are they "family affairs"? Our guess is that they are not nearly so fixed nor so stereotyped as those of people who live in cities. The question is open for comment! ✓

Solitude

*How still it is here in the woods. The trees
Stand motionless, as if they did not dare
To stir, lest it should break the spell. The air
Hangs quiet as spaces in a marble frieze
Even this little brook, that runs at ease,
Whispering and gurgling in its knotted bed,
Seems but to deepen, with its curling thread
Of sound, the shadowy sun-pierced silences.
Sometimes a hawk screams or a woodpecker
Startles the stillness from its fixed mood
With his loud careless tap. Sometimes I hear
The dreamy white-throat from some far off tree
Pipe slowly on the listening solitude,
His five pure notes succeeding pensively.*

—ARCHIBALD LAMPMAN (1861-99)

Ousting Fatigue

ACCORDING to psychologists, getting tired depends upon many factors and not entirely upon how hard, nor how long, we have been at work. We know people who seem to bear this out: they labor long and yet seem never to reach the point where they must stop. These fortunate folks relax easily, sleep well, and get joy out of everything they do. Too many of us today remain tense and so keyed up that insomnia haunts us. We find then even the most pleasurable experiences beyond our capacity of enjoyment because we are overtired. This is especially true of mental workers like writers, lawyers, judges, teachers, actors and the

like, some of who turn farmer to strike a balance between nervous and physical strength.

Dr. Norman Vincent Peale, author of *A Guide to Confident Living*, says that we do not need to be defeated by anything; that thinking positively fights off defeat and thinking victory results in gaining it, even victories over weariness.

The ways in which experts apply this advice to routing weariness are as varied as the individuals in need of it. They agree with that old maxim, "As we think so we are."

Dr. Ernest Dichter, a practicing psychologist, says, "The world is full of persons who are convinced they would get a great deal more done if only they had more time." He insists that none of us would do more than we are now doing because none of us will tackle a difficult job until delay is no longer possible. Much of the emotional turmoil coming from putting off until tomorrow things we should have done today, is at the root of weariness.

If you don't believe it, think of some projects that you have decided you will do "some day." Maybe it's a job of housecleaning, learning to play the piano or tackling a new way of growing some fruit or vegetable. If you are in earnest and will set up some definite plan to accomplish your objective, you'll not only finish it but you will do it with less wear and tear.

At least that's the way it's worked out for me since I started putting Dr. Dichter's advice to good use. When I schedule too much, I not only cannot finish but I am increasingly tired by the amount I do *not do*! One of the best ways to outwit weariness is to plan your activities and keep to your plan.

Sometimes when we are overtired and find it difficult to go to sleep, we can follow a remedy our grandparents used which is to soak our feet in warm water. This tends to draw the blood away from the brain and is inductive to sleep. Others have a bite to eat before going to bed, for the same reason. What you eat depends upon your personal likes and how well your stomach behaves. You may find that a pillow tucked under your knees or in the small of the back helps to ease the tension in tired muscles and so induce sleep.

Another way to relieve tension after a nerve-tiring day is to do something with the hands, such as knitting, crocheting, tatting or other simple manual tasks. The theory behind this is, that many small and repetitious movements requiring little or no mental effort are soothing and relaxing. Some people find a quiet game of cards in the evening has a quieting effect, taking their minds off their personal problems.

Leisurely preparations for bed, giving the face a rinse of tepid or cold water and a later cold cream rub of the face and neck will go far to relax taut muscles of the neck and face. A friend, when she is all in, asks to have the back of her neck massaged. With a little skill and some practice one can soon learn to do this helpful treatment for another member of the family. A gentle and firm rubbing, extending out over the shoulders and the upper back, tends to bring a greater circulation of the blood, nerves are soothed and muscles relax.

There are a number of ways and means to deal with that tired feeling—both for relaxing and sleep or giving yourself fresh energy to carry on when you must. Avoid mental turmoil; follow a sensible schedule that gets enough, but not too much done daily; discover those devices which are of the greatest help to you and use them when needed. Don't worry unduly about tiredness—it is a natural and healthy symptom in most cases. Sometimes it is merely our minds balking at a difficult or distasteful task or duty. Learn to distinguish between physical, nervous and mental fatigue and strive to keep a balance between your activities. If fatigue is extreme or unduly prolonged, then by all means consult a doctor.—Eleanor M. Marshall. ✓

The Place Beyond the Hill

Our urge to come to Gull Lake was stronger than logic. Here in an isolated wilderness we have made a home and found rich new satisfying experiences.

by LINDY FRASER

ON a bright October day in 1931 my husband and I and our young son saw Gull Lake for the first time. It was one of the most memorable days in all our lives, because, although we didn't know it at the time, Gull Lake was to become the Place Beyond the Hill for us—that better place which exists in dreams for all of us, the place for which we all long, but few of us reach.

We came with a definite purpose. We were in search of some place in Manitoba where our son would be free of asthma and hay fever. This search had gone on for years, and had taken us to many delightful corners of our province, none of which held the answer to our problem. Friends told us of Gull Lake and its clear spring water, white sand beach and clear surrounding woods of pine and birch. They warned us that the road was bad, but with a rainbow of hope beckoning, we traveled many byways. We had come through Red River gumbo, Assiniboine mud, and over perilous rocks in the Winnipeg River area. We felt that one more bad road was insignificant. We had a sturdy little Whippet car that never failed us.

So we packed a lunch basket and came to Gull Lake that October day—Peter and I, our son Douglas, his cousins Jack and Doris, and our little

grey cat Warlock who accompanied us on all our expeditions.

Gull Lake is sixty-five miles north-east of Winnipeg, along No. 1 highway to Beausejour, then due north. When we left the highway we found ourselves in low-lying country where neat compact haystacks mushroomed in clumps over expansive rich



A corner of the white sandy beach at siesta time on a lazy summer day.

meadows. The road tapered to a trail and the Whippet groaned through deep ruts, and panted nervously as it brought us safely over narrow ridges. The diminished trail pointed a feeble finger ahead—into the dark north of a little known and certainly untraveled land. Peter's face was grim. An uneasy atmosphere quelled my

native exclaimed, as he eyed Peter searchingly for further signs of mental derangement. It was none of his concern. With a disinterested shrug of his shoulders he turned away, grunting non-committally—“Straight north”. Six, seven miles, maybe nine, ten—I dunno!”

Twice more we asked direction and distance. Twice more we had similar replies. Miles were an undetermined, unnecessary measure in this land of limitless muskeg, and Gull Lake meant nothing to the few hardy souls whose lives were spent forcing back the muskeg from a few acres here and there.

ONCE Peter and the Whippet set their minds on a certain journey they didn't like to be beaten. The Whippet, refreshed with a drink of ditch water, got its second wind, and the look of disappointment on all our faces when we thought Peter was going to turn back was enough to bolster his endurance, so they kept on conquering the miles. Those miles were somewhat like Kipling's in “Yellow Dog Dingo”—“never growing nearer, never growing farther, never arriving anywhere.” Ours differed in that we did eventually arrive at Gull Lake.

After miles of twisting trails we rounded one more curve, and there we were—in another world. It was like nothing we had ever known before. We landed on a beautiful green, spring-fresh even in October. Beyond the green lay Gull Lake—a tranquil gem, its sparkling waters glittering in the crystal light, enhanced by a filigree setting of trees, with colors broken here and blended there, masterpiece of a deft artist. We were speechless with the surprise of it, awed by its sheer beauty.

Half an hour in the clean sweet air convinced Douglas that here he could breathe freely. Before we had finished our picnic lunch we knew that we must always come back. We made enquiries about buying a lot, and, full of excitement, set out to choose the spot we wanted. We knew it the minute we saw it. It had always been ours, and now, at last, we had come to claim it. As we walked over its deep soft carpet of pine needles a gay little chickadee fussed along beside us, welcoming us with voluble hospitality, bustling from tree to tree.

We bought the lot and acquired the chickadee. We built a little cottage where Douglas would spend his summers, and where we would come for



Set among well-spaced birch our “dream house” is viewed from the camp side.

gypsy exuberance for travel—on any trail—by any mode. When a wave of heavy peat smoke came rushing at us from blue muskeg to the east Warlock gave over his self-appointed task of licking at Douglas' ear to crouch on the floor of the car and wail dismally with instinctive fear of fire.

MORE endless miles till the Whippet could no longer respond to Peter's urging, and with a drooped attitude to this adventure swayed to one side, sagged all over, and lay panting for breath. That road was too much even for a hound. It was also too much for Peter. After a sympathetic examination of the hound's tummy he exploded—“Well! You can have your Gull Lake! I wouldn't go over this road again for anything!”

Belligerently he stomped off to interview a native who stood leaning on a fence rail, gazing intently at us. “How far is it to Gull Lake?”

Astonishment lightened stolid features for a moment. “Gull Lake!” the



Peter and Lindy Fraser employ off-season time on repairs and finishing tasks.

weekends and vacations. We came for many years, and the road never seemed to matter very much, least of all to Peter.

Through happy years Douglas grew up and Warlock became urbane. Gull Lake was in our blood—enriching with its iron of peace, cleansing with its clear springs, healing with scent of pine and balm of Gilead, invigorating with its appeal to eye and heart and soul.

WHEN, on a day in 1946, Peter and I found it necessary to give up city life it was only natural for us to want to come to Gull Lake. We decided to buy a little more land and build a few cottages for summer rental, which would give us some income, surely.

Soothed with the sedative promise of days and weeks and years at Gull Lake we let our hearts persuade us, against the advice of family and friends who held the view that a bad road was a serious handicap to a holiday spot. They pointed out realistically the dangers of isolation. But our urge to come to Gull Lake was stronger than logic. To be sure, few people had heard of Gull Lake. Lots were privately owned, and there were none of the usual beach attractions. We realized all this—but we also knew that once people found this place they always came back, and from this knowledge we drew our courage.

At the eastern tip of the lake we found a beautiful bit of property which was ideal for our purpose. With a beach of white clean sand, the land, well treed, climbed sharply from the shore to a little rise which offered perfect drainage and seemed a likely place for striking springs to provide a water supply. We had never really explored this spot before, mostly because it was inaccessible through the tangle of undergrowth and deadfall. Safely screened behind this barricade were magnificent birches, large balsam, and a tight little thicket of protective spruce. I exclaimed—"Why! It's a regular *Walden Wood!*" And so we named our camp.

Again it was a day in October. Warm sun reached through thinning foliage, stirring rich mold and spicy ripened leaves to release their winery aroma. Excitement grew in us, and the plan lay fully revealed before us. There was the spot for our first cottage: one here, another there. Here we would sink a sand point. Penetrating deeper into the woods we saw the perfect setting for our dream house which would one day stand there—already landscaped, each birch correctly placed, our lake view framed majestically. Seeing all this we knew we had made the right decision. Already it belonged to us! We raced back to Winnipeg to interview the owner.

There we met the first setback to our plan. Someone else had made the owner an attractive offer for all his holdings at Gull Lake, which included two separate lakeshore lots and about sixty acres of woodlot besides the bit of lake frontage we wanted. The owner wanted to sell, so we would have to act quickly.

This was a blow. We had very little cash, but our minds were made up. We would rent our house in Winnipeg, get the cash surrender value of Peter's bit of life insurance, and take the plunge. Instead of a small camp

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- 4 NO GUESSWORK** — Results are sure every time if you follow Certo's kitchen-tested recipes.



Try this quick,
easy recipe

HOMEMADE STRAWBERRY JAM

4 cups prepared fruit (about 2
quarts ripe berries and 2 lemons)

7 cups (3 lbs.) sugar
½ bottle Certo fruit pectin*

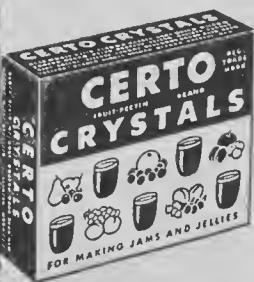
To prepare fruit. Crush completely, one layer at a time, about 2 quarts fully ripe berries. Measure 3¾ cups into a large saucepan; add ¼ cup lemon juice.

To make jam. Add sugar to fruit in saucepan. Mix well. Place over high heat, bring to a full,

rolling boil and boil hard one minute, stirring constantly. Remove from heat; at once stir in Certo. Then stir and skim by turns for 5 minutes to cool slightly and prevent floating fruit. Ladle into glasses. Paraffin at once.

Yield — about 10 medium glasses (5 pounds).

* Or, if you prefer Certo Crystals, use recipe in Certo Crystals package.



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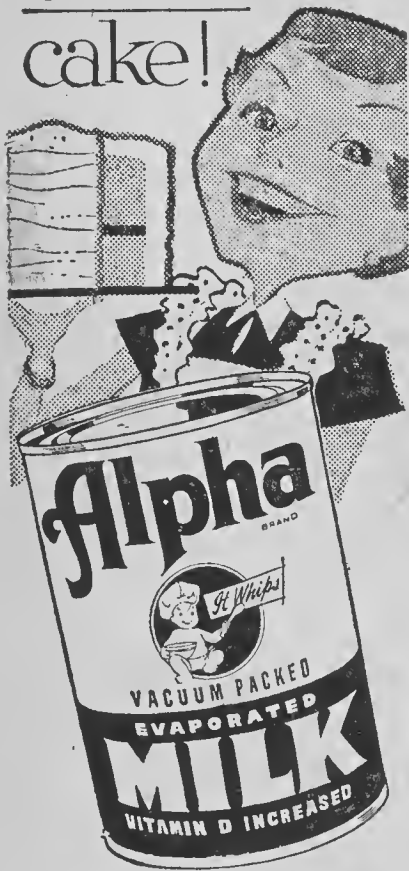
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site at a reasonable price we ended up with acres of lot and little capital.

That winter was a nightmare of ill health and frustrations. But our courage was high, and bravely we faced the frustrations, staunchly pulling up the roots of the known and scattering the seeds for the unknown. Word of our plans got around, and when, surprisingly enough, we got applications for three rentals our enthusiasm went sky high. We bought lumber for a start—poor stuff at high prices. We began to shop for beds, blankets, dishes, sinks, stoves, pots and pans, but no one seemed to have any to sell. Down went our spirits, and we wondered if we were crazy.

We went through those winter weeks at a brisk canter, and some way managed to get over the hurdles of packing dishes, books, and all the accumulation of a lifetime. We rented our city house for the first of May. Everything we did from then on was so definite, so final. It was like a door slamming shut, locking itself behind us. As each packing box was nailed up the house took on a new, strange emptiness; our every step echoed in our consciousness till we longed to cry, in our loneliness and uncertainty.

On the last day of April, our car piled high with belongings, Peter and I along with Warlock left Winnipeg and started for Gull Lake—not just for a weekend—not just for a vacation—but for always.

IT was raining when we left, and we were very tired. We knew the road would be bad, but we had no choice now—we must get to Gull Lake. The highway to Beausejour was hard-surfaced, but when we got there and considered the last 26 miles ahead of us and saw a car hopelessly stuck, we decided not to attempt it without a full day for the drive. So we got a room at the hotel for the night.

So, on May Day, after an excellent breakfast, we started on that muddy road north from Beausejour. Half way along we got stuck, and the road ahead looked positively impassable. Peter sloshed to the nearest farm and got the farmer to pull us through a stretch of a couple of miles of varying degrees of mud, for which he relieved us of ten dollars. Once again we were able to navigate on our own power.

We finally arrived at camp, famished, but happy. Warlock immediately discovered a new mouse patch which demanded his undivided attention. We stepped into our beloved cottage, and its familiar welcome seemed to imply a knowledge that we were here to stay.

The little ruffles on the lake danced for joy and tossed gay bubbles at our feet. We felt like trespassers—our footprints the first to mark the smooth packed sand of the beach. We were severely chided by a pileated woodpecker who left his stump in high dudgeon, and swooped with a defiant flourish into the balsams. The air was like wine. The sweet scent of pine and balsam came to us on the north-west wind like a kiss and an invitation. This was the breath of home.

We felt small in the strange and powerful quiet. We were alone—here to enact the new drama of our lives; to work out for ourselves a new way of living. Our future was a challenge reaching to our very souls. We were no longer lonely, and we were intensely unafraid.

We planned to build three cottages, which we had promised to have ready by July 12th for our first three families. We lost no time in getting started, but a new difficulty seemed to crop up every time we turned around. It was impossible to get help. Discouragements, uncertainties, long days of unfamiliar work, wearied bodies driven on by the sense of urgency. The days flew faster and faster. Progress seemed slower and slower. We watched wet skies and shuddered. Rain fell with harsh intemperance. Saw blades doubled up against the defiant resistance of tough, soggy lumber, their edges dull after a few hours' struggle, and precious time must be squeezed from some part of our waking hours to sharpen them. The engine that powered the saw was temperamental as all-get-out, and almost human in its ability to choose the most inopportune times for its tantrums. When it was on good behavior the whine of the blade as it ripped through two-by-fours and slashed quick clean cuts in siding was sweet music to our ears. The sound of hammering of nails were to us the drumbeats of progress.

Looking back to those days we find it hard to believe the amount we accomplished. I wish I could put down on paper just what it was that gave us the power. We had it—we knew we had it, and it was a wonderful knowledge within us—with always the conviction that we were doing the right thing. We visualized the things to be done and calculated the work required. Whipped on by desperation, sheer will power turned struggle into achievement and enthusiasm engulfed the setbacks.

THREE cottages promised for July 12th! That date blazed constantly in our minds with ominous closeness. We had another request for a cottage for the same date, so rented our own cottage. Now these folks asked if they could come a week ahead of schedule. Some way, somehow, we moved and rearranged stored crates, boxes and furniture heaped there. On July 5th we moved out and our tenants moved in. It seemed sacrilege to rent that cottage.

Our first deadline met!

July 12th was only a week away! Peter finally managed to get a neighbor across the lake to come and help him. We worked harder than ever, but with more confidence. Days were a frenzy of sawing, hammering and painting; nights blessed oblivion. The men finished the second cottage, and

turned to the third and last. They finished the chimney, put in the sink, built cupboards around it, put on doors, screen doors, laid congoium, put up partitions, and set up the stove. The days slipped by.

Each day was hotter than the one before. The heavy air was suffocating. Each of us kept to his task, concentrating with all the force that was in him. Our neighbor realizing, our anxiety, and knowing our enthusiasm, matched our hours with his, standing by us with a great loyalty and fine spirit for which we shall be eternally grateful. We shoved each soggy, hot day behind us.

Came July the twelfth!

It was hotter than the previous days had been—with a great unease of air and sky, a fear in our hearts. Three families were due to arrive.

The first family came in the morning, and they were delighted with everything. I felt better. The second family was to arrive later, and the third by the evening bus, where Peter would meet them. I followed the men to the third cottage, with dishpan, broom and mop. At last the curtains were up and the furniture in place by late afternoon. The sky had darkened, the air was stifling, and a glance at the sky showed clouds pregnant with storm. Nothing in the world seemed real. A horrible pressure everywhere—pressure of heavy air—pressure of work—darkness pressing in on us—our ears filled with roars of thunder. Then came the rain! And with it the tenants for the second cottage, in a car that looked the length of half a city block, with a shiny red canoe atop. I was so excited I forgot my exhaustion.

Suddenly I realized we had no place to live! We had been too busy to give the matter thought, too tired to care. That night I could have lain under a tree, cheerfully, even in the rain, and slept. We had built a small cottage, ten by twelve, which we called the "practice house," and used for storage and paint shop. It was crowded with boxes, crates, sinks, stoves, screen doors and nail kegs. The floor was littered with oil and paint cans, and daubed with paint. It had no doors and the windows were just set in. Exactly an hour before Peter had to meet the bus, the men finished the third cottage.

Peter too, now realized we had no place to live. So they cleared some space in the little paint shop, moved what could be moved out in that pouring rain, hung an inadequate

(Please turn to page 57)



Summer cottages set among trees was a major feat of first year of new enterprise.



A tea table showing attractive arrangement of food and table appointments.

Teas and Receptions

Special feature events make demands on the hostess' time and planning during June

SYMBOLS and events associated with June make it one of the busiest social months of the year. Among such occasions there are graduations, club or group wind-up teas, bridal showers and wedding receptions. For some of these events the catering is bound to be done at home.

Refreshments usually center around sandwiches. Fancy rolled, ribbon or open face sandwiches add a touch of glamour to the sandwich tray. Here are some facts to keep in mind when shopping for sandwich makings. One small sandwich loaf, 1½ pounds in weight cut in slices slightly less than ¼ inch thick makes 60 to 80 small sandwiches which will serve 12 to 15. One-quarter pound butter will spread this loaf. For fillings, 1½ pounds or 2½ cups moist meat spread is sufficient for one loaf of bread as is a dozen hard cooked eggs, chopped and mixed with onion, mayonnaise and seasonings.

Most meat, cheese and egg sandwiches can be made ahead of time. Wrap them carefully in waxed paper, cover with a damp cloth and store in a cool place.

The tea table can be attractively arranged with a large tea tray and charming tea service on a lace or embroidered cloth. Tall, lighted tapers in silver or crystal holders and a floral centerpiece add dignity and grace to the table. An abundance of dainty sandwiches, pickles, small cakes, mints and nuts will complete the table appointments.

When it comes to sandwiches and cakes, keep them simple and easy to manage. Four or five sandwiches and two or three dainties is sufficient serving for each person. One-half pound of tea should be allowed for 50 people, along with 1½ pints light cream and one pound cubed sugar. Two quarts each of pickles and olives will generously serve 50.

Savory bites with tasty filling like stuffed toasted mushroom caps, cheese rolls or toast fingers are well liked at a tea. Everything should be in tiny bite-size portions and with a look that promises delicious eating.

Open Sandwiches

These sandwiches are made with only the lower slice of bread. Otherwise make

them the same as any other sandwich and garnish with appropriately colored items such as crumbled hard-cooked egg yolks, sliced olives, minced parsley, pimento, lemon slices, nut meats, etc.

Chilled Pinwheels

Remove crusts from top and sides of fresh loaf of bread. Cut bread lengthwise into slices ⅓ to ¼ inch thick. Discard bottom crust. Spread bread slices with butter, softened cheese or any smooth spread. Lay alternating strips of green pepper and pimento crosswise, one inch apart, over entire strip of bread. Beginning at one end, roll bread as for jelly roll. Spread soft butter on last lap of bread to make it stick, wrap small rolls in waxed paper and place in refrigerator to chill. When ready to serve, slice about ¼ inch thick. Serves 6.

Ribbon Sandwiches

Make from alternate slices of white and dark bread and two fillings. Fillings should contrast in color with bread and with each other. Remove crusts from bread and cut into ½ to ¾-inch slices. Cut slices lengthwise of loaf. Arrange slices in groups of three. Spread slice one with butter and filling; slice two with butter, put in place and spread with butter and filling; slice three with butter and complete sandwich. Wrap in waxed paper and chill for at least ½ hour; cut in thin slices.

Suggested Fillings

Cooked ham and nuts put through food chopper and moistened with salad dressing.

Equal parts chopped walnuts and grated maple sugar spread on open face sandwiches.

Cream cheese moistened with salad dressing mixed with pimento and spread on buttered bread.

Tuna fish, hard-cooked egg and chopped sweet pickle combined with salad dressing and crisp leaf of lettuce.

Maraschino cherries, nutmeats and coconut.

Thimble Cookies

½ c. butter	1 c. sifted flour
¼ c. sugar	Nuts, chopped
1 egg, separated	finely
1 tsp. flavoring	Jelly

Cream butter, add sugar gradually and mix well. Add well beaten egg yolk, flavoring and flour. Shape into balls about the size of a walnut. Dip in unbeaten egg white, then in finely chopped nuts. Dent in center with a thimble. Place on greased baking sheet and bake (Please turn to page 55)

Rich Old-Fashioned Strawberry Shortcake



Bake it with MAGIC and serve it with pride!

Better close the kitchen window when you open the oven door! This sumptuous Magic-made Shortcake is so delicate and feather-light it longs to take wings! Yet it holds its shape nobly as you drool on the crushed strawberries and pile high the snowy whipped cream. Heavenly days, what a feast!

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*Costs less than 1¢
per average baking*

INDIVIDUAL STRAWBERRY SHORTCAKES

2 cups sifted pastry flour	½ cup chilled shortening
or 1¾ cups sifted all-purpose flour	1 egg, well beaten
3½ tps. Magic Baking Powder	Milk
½ tsp. salt	Soft butter or margarine
Pinch of grated nutmeg	Sweetened sliced strawberries
3 tps. fine granulated sugar	Lightly-sweetened whipped cream
	6 whole strawberries

Grease a cookie sheet. Preheat oven to 400° (hot). Mix and sift twice, then sift into a bowl, the flour, Magic Baking Powder, salt, nutmeg and sugar. Cut in the shortening finely. Combine the well-beaten egg and ¼ cup milk. Make a well in the flour mixture and add liquids; mix lightly with a fork, adding a little more milk, if necessary, to make a soft dough that is a little stiffer than a plain biscuit dough. Knead for 10 seconds on lightly-floured baking board and pat or roll out to ¾-inch thickness; shape with floured 2½-inch round cookie cutter. Arrange, well apart, on prepared cookie sheet; brush with milk. Bake in preheated oven 14 to 16 minutes. Split hot shortcakes and spread with butter or margarine; arrange bottom halves on individual serving plates and pile with sweetened sliced strawberries; cover with top halves of shortcakes. Top each shortcake with a spoonful of whipped cream—or with more fruit and cream—and add a whole berry. Yield—6 shortcakes.

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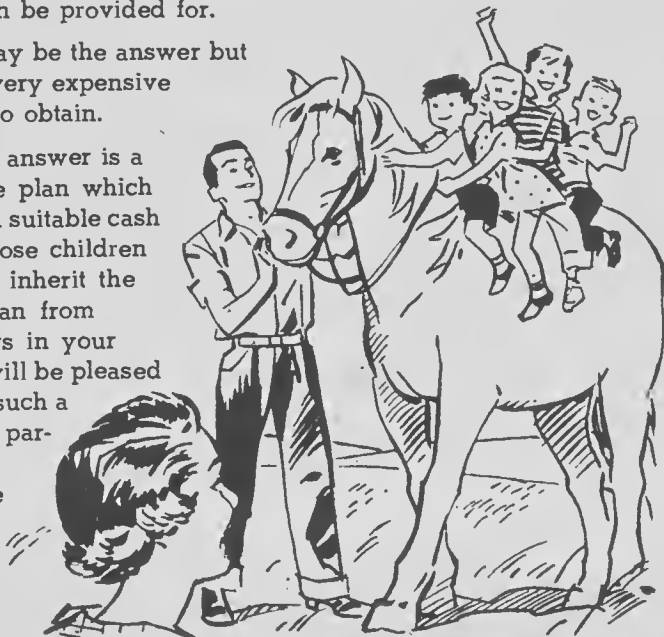
Helpful Suggestions for solving many farm problems are found in
every issue of *The Country Guide*.

HOW MANY FAMILIES WOULD YOUR FARM SUPPORT?

THE FARMER with more than one child is faced with the problem of how to divide his estate fairly when he dies. Usually the farm will support only one family in comfort and the question is how can the other children be provided for.

More land may be the answer but that is often very expensive and difficult to obtain.

The practical answer is a life insurance plan which will provide a suitable cash legacy for those children who will not inherit the farm. The Man from Manufacturers in your community will be pleased to show you such a plan for your particular need. Why not give him a call?



62-55

THE
MANUFACTURERS LIFE
INSURANCE COMPANY

June Is Strawberry Time

"God could have made a better berry but doubtless God never did."
In praise of the strawberry by Izaak Walton in preface
to *The Complete Angler*

STRAWBERRIES and cream have long been a favorite dessert, but new combinations such as strawberries with cottage or cream cheese, strawberries and ice cream or strawberries in milk puddings are equally delicious. June is celebrated as "Dairy Foods" month in Canada. Since it also happens to be strawberry time, it is appropriate to introduce some new combinations.

Frozen strawberry roll combines a crumb pie-shell mixture and an elegant creamy strawberry filling. It's made quick-as-a-wink with sweetened condensed milk. Try packing the graham cracker crumb mixture into a large empty fruit juice can. An empty soda bottle helps do the packing easily and gives a crunchy lining to the big 48-ounce can. Then pour in the strawberry-cream filling and freeze the whole dessert. At serving time, unveil your triumph easily, by cutting the bottom out of the can and loosening the roll with a knife.

Strawberry seafoams are basically lemon cottage cheese custards baked in individual cups and served cool, with fresh strawberry sauce. There can be many variations of the seafoams to make throughout the summer as other fresh fruits appear for use. For a tasty, colorful item to serve at a tea or informal get-together, try strawberry vanilla tarts. They are easy to make and easy to serve.

Homemade strawberry sodas are even better than the drugstore variety. For each soda use 4 T. crushed, sweetened strawberries, 1 T. table or whipped cream, carbonated water and 2 scoops of ice cream. In a tall glass mix the fruit and cream. Then fill the glass full of carbonated water, stir slightly and add ice cream. Topped with whipped cream and a cherry this is really "special."

Frozen Strawberry Roll

- | | |
|-----------------------------|---|
| 1½ c. graham cracker crumbs | 1 (15 oz.) can sweetened condensed milk |
| 3 T. sugar | 1 c. crushed strawberries |
| ½ c. melted butter | |
| 2 eggs, separated | |
| ¼ c. lemon juice | |

Combine crumbs and sugar. Add melted butter. Blend well. Pour ⅓ c. crumb mixture into an empty, buttered 48-oz. (large fruit juice can) that has been cleaned and dried. Press mixture firmly into an even layer on bottom of can. Save ⅓ c. crumbs for top. Press remaining crumbs around sides of can with hands. Press firmly. Chill in freezer until ready to fill with strawberry mixture. Beat egg yolks till thick, then add condensed milk and blend. Add lemon juice and crushed strawberries. Mix thoroughly. Beat egg whites until stiff and fold in strawberry mixture. Pour into graham cracker lined can. Top with ⅓ c. crumbs and freeze overnight. Before serving cut bottom from can. Run knife around edge of crust and push roll through tin. Cut in 8 slices and serve immediately.

Strawberry Seafoams

- | | |
|--------------------------|--------------------------|
| 2 T. soft butter | 1 T. flour |
| ¾ c. sugar | ¼ tsp. salt |
| 2 tsp. grated lemon rind | ¼ c. lemon juice |
| 3 eggs, separated | 1 pt. fresh strawberries |
| 1 c. cottage cheese | 2 T. sugar |

Cream butter, sugar and lemon rind together. Beat egg yolks and cottage cheese together until curds are fine. Then add to butter-sugar mixture and blend well. Add flour, salt, lemon juice. Mix thoroughly. Whip egg whites until stiff, then fold into cheese mixture. Pour into 6 buttered custard cups, in pan of hot water. Bake in slow oven (325° F.) 30 to 40 minutes. Custard is done when a silver knife inserted into center comes out clean. Remove cups from pan of water. When slightly cool, ease custards out of cups with a knife onto individual dessert plates. Top with sweetened strawberries.

Strawberry Vanilla Tarts

- | | |
|----------------------------|----------------------------|
| 1 pt. fresh strawberries | 1 pkg. vanilla pudding |
| ½ c. sugar | 2 tsp. grated orange rind |
| 1 T. quick-cooking tapioca | 6 baked pastry tart shells |
| 1 T. lemon juice | |
| 2 c. milk | |

Wash and hull strawberries. Then crush 1 c. strawberries and mix with sugar, tapioca and lemon juice in saucepan. Cook berry mixture over medium heat, stirring constantly until thickened and clear. Cool. Prepare vanilla pudding with milk, according to package direc-



Strawberry and whipped cream tartlets make a festive tea or meal-time dessert.

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tions and add grated orange rind. Cool. Fill tarts two-thirds full with cooled pudding. Fold whole strawberries into cooked berry mixture until all are glazed. Heap glazed strawberries on pudding in shells and pour any remaining syrup over berries.

Strawberry Tartlets

12 slices bread ½ c. granulated
4 T. butter, sugar
¼ c. granulated ½ pt. whipping
sugar cream
1 pt. strawberries

Preheat oven to 350° F. Trim crusts from bread with kitchen scissors. Spread both sides with butter and sprinkle with granulated sugar. Fit slices of bread into muffin tins. Bake in preheated oven until lightly browned. Fill tartlets with strawberries sweetened with ½ c. sugar and top with whipped cream and whole berries. Makes 12 tartlets.

Strawberry Ice Cream

24 marshmallows 1 c. evaporated
2 c. strawberries, milk chilled icy
fresh or frozen cold

Melt marshmallows in top of double boiler over hot water. Mash strawberries and add to marshmallows. Cool. Whip evaporated milk in chilled bowl until stiff. Add strawberry-marshmallow mixture and beat until fluffy. Pour into 2 refrigerator trays and freeze, with control set at coldest spot. Makes 8 to 10 servings. ✓

Teas and Receptions

Continued from page 53

in moderate oven (350° F.) for 5 minutes and dent again. Bake 15 minutes. Fill with jelly while still hot.

Butter Tabs

1 c. butter Grated rind of 1
1 c. sugar orange
1 egg, separated 1 c. sifted flour
½ tsp. lemon juice ½ c. finely crushed
Grated rind of 1 corn flakes or
lemon soybean flakes

Cream butter and sugar thoroughly. Add egg yolk and all the flavoring. Beat well. Add sifted flour and beat until very light. Chill thoroughly. Shape into small balls, dip in slightly beaten egg white and roll in crushed corn flakes. Place on greased baking sheet one inch apart and bake in a moderate oven (350° F.) for 30 minutes.

Chinese Chews

¾ c. sifted flour ¼ tsp. salt
1 tsp. baking 1 c. chopped
powder walnuts
1 c. stoned dates, 2 eggs
chopped 1 c. sugar

Sift flour with baking powder, sugar and salt. Add dates and nuts. To this mixture add eggs, which have been beaten until light. Spread as thinly as possible in well greased shallow pan and bake in moderate oven (350° F.) for 20 minutes. When baked, cut into small squares and roll into balls. Then roll in fine, granulated sugar.

Butter Tarts

1 egg 1 tsp. vanilla
1 c. brown sugar ½ tsp. lemon
1 c. currants flavoring
2 T. butter ¼ tsp. salt

Beat egg, add sugar, salt, vanilla and lemon flavoring; continue beating until mixture is full of bubbles. Wash currants, fold in with melted butter. Line small muffin tins with rounds of flaky pastry. Drop mixture from teaspoon into tart shells. Bake 12 to 15 minutes in 400° F. oven until filling is set and pastry nicely browned. ✓

Tempting Sugar 'n' Spice BUNS



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Whether you serve them fresh from the oven for tea-time snacks, or toasted and generously buttered for breakfast, the whole family will cheer when you serve delicious, fragrant Sugar 'n' Spice Buns. They're easy to make, too, with Fleischmann's Active Dry Yeast... so when you bake at home, why not surprise your family with this sugar 'n' spice treat?

SUGAR 'N' SPICE BUNS

Makes 32 buns

Wash and dry

¾ cup seedless raisins
¾ cup currants

Scald

1 cup milk

Remove from heat and stir in

½ cup shortening
½ cup granulated sugar

Cool to lukewarm.

In the meantime, measure into a large bowl

½ cup lukewarm water
2 teaspoons granulated sugar

and stir until sugar is dissolved.

Sprinkle with contents of

2 envelopes Fleischmann's Active
Dry Yeast

Let stand 10 minutes, THEN stir well.

Sift together 3 times

2 cups once-sifted all-purpose flour
1½ teaspoons salt
2 teaspoons ground cinnamon
½ teaspoon grated nutmeg
¼ teaspoon ground cloves

Stir the lukewarm milk mixture and

1 well-beaten egg

Into the yeast mixture.

Stir in the sifted dry ingredients and beat until smooth and elastic. Stir in the fruits and beat well.

Work in

2½ cups more (about) once-sifted
all-purpose flour

Turn out on lightly-floured board and knead dough until smooth and elastic.

Place in a greased bowl and brush lightly with melted butter or margarine.

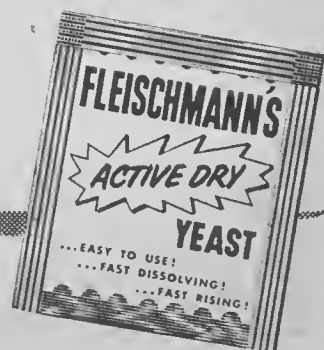
Cover and set dough in warm place, free from draft and let rise until doubled in bulk—about 1½ hours. Punch down dough. Divide dough in half. Form each half of dough into a roll 16 inches long. Cut each roll into 16 pieces. Form into balls and place 16 balls in each of two greased 8-inch square cake pans.

Brush liberally with melted butter or margarine.

Combine

½ cup granulated sugar
1 teaspoon ground cinnamon

and sprinkle buns with this mixture. Cover and let rise until a little more than doubled in bulk—about 1¼ hours. Bake in a moderate oven, 350°, 30 to 35 minutes.



Needs no refrigeration

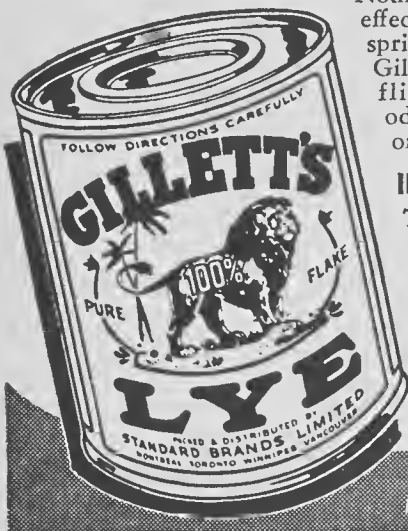
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Design No. E-PE-8056

Embroidered organdy apron for new bride or homemaker. Delicate and feminine, apron is ideal when entertaining. Waistband daintily smocked, flowers embroidered on skirt. For prettiest effect, choose pastel organdy. Materials: 1 skein each of white, dark green, light brown embroidery cotton, 2 skeins yellow, crewel needle, 1 yard organdy — 45 inches wide, sewing thread, smocking transfer pattern with dots spaced $\frac{3}{8}$ inch apart. Design No. E-PE-8056. Price 10 cents.

Design No. C-TW-351

How colorful and attractive this set will look in bathroom! Gay, crocheted daisies sewn on towels and facecloth. For a standard 3-piece set make 10 large, 9 medium, 13 small and 8 half daisies. Choose shades to harmonize with preferred color scheme. Materials: Pearl cotton size 5: 3 balls blue, 2 balls pink, 1 each of orange, rose, yellow, green, crochet hook No. 7. Design No. C-TW-351. Price 10 cents.

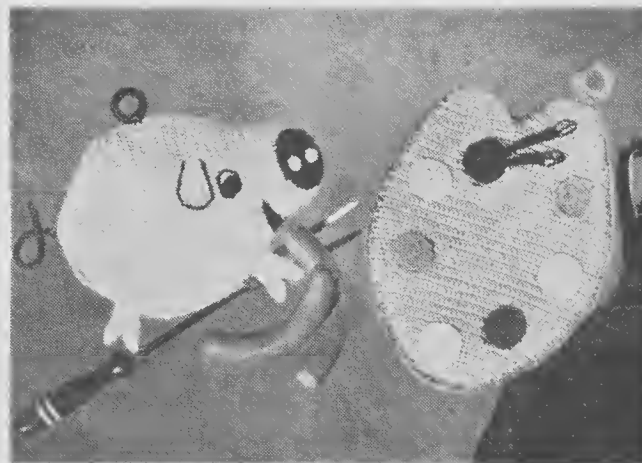


Design No. CS-389

Here is a smart cloche hat, bag and belt set to accessorize your outfits. Gives a fresh look to last season's dress or blouse and skirt. Set looks equally charming in dark or pastel colors. In making items, use double thread throughout. Materials: 7 balls cronita, crochet hook No. 4, assorted sequins and beads, velvet ribbon — $\frac{5}{8}$ inch wide, 8 large hooks, 4 snap fasteners, 1 spool elastic thread. Design No. CS-389. Price 10 cents.

Design No. CS-369

Novel potholders make useful addition to household. Well padded to protect hands, yet flexible. Snout, mouth, eye, feet and tail of pig and color dabs and brush of palette are crocheted separately, then sewn in place. Materials: 3 balls pink cronita, 2 balls ecru, 1 each of black, red, 5 other colors, crochet hook, bone ring. Design No. CS-369. Price 10 cents.



Address orders to The Country Guide Needlework Department, 290 Vaughan Street, Winnipeg 2, Manitoba.

Beyond the Hill

Continued from page 52

screen door over the entrance, cut a hole in the wall for a stove pipe, and set up a little "Rancher" stove. I moved in with the remains of a roast we had had for dinner, followed by a vet, bewildered, unhappy little grey cat. Peter went off to meet the bus. The storm increased in fury. That cottage was very small, and seemed to be all windows. Rain slashed at it, wicked lightning spotlighted me there. Thunder hurled itself in wild pursuit with shattering intensity.

But storm or no storm, folks go on vacation. Peter was soon home with our third family. After he got them comfortably installed, and finished his camp duties, he came hurrying anxiously to see how I had weathered the agonies of work and storm.

Someway we had made the deadline! What did it matter if we were crowded in with screen doors and packing cases in a tiny hovel! The twelfth of July was over. It had taken with it the urgency of our work even as its culmination of storm cleared the way for a summer of perfect camping weather.

In our first moments there I called the little cottage "The Hovel." The name stuck, though we intended before it was built to name it "Little Hiawatha." We lived there three months, built it around us. Before many weeks it was completely and conveniently equipped with sink, shelves, cupboards, icebox and chimney. It became elegant besides, acquiring a veranda with a drop table, deck chairs and lounge.

As we relaxed and had time to think again I thought often of that line someone had written—"The blessing of earth is work."

Through the work and stress of those crowded days we were supremely conscious that for the first time in our lives that we were in the woods in the springtime. We saw the ice go out on our little lake. We heard the first loon's laugh and rushed to the shore to laugh with him. We woke to a chorus of rollicking birds and worked to an accompaniment of sweet birdsong all day long. Each evening the whippoorwill announced the approach of dusk. The great blue heron sailed low over the lake to his nighttime rendezvous. Little tree toads chattered noisily and frogs boomed. We watched the turtles swimming by, round heads sticking straight out of the water like periscopes, and were fascinated by the diving skill of the water witch. The loneliness of the prairies came to us in the mud-sucking, dull-thudding, squidgy sound of the bittern's strange love song.

The little woods plants bloomed in shy splendor before the concealing leaves came out on the trees. Bracken spread fresh covers over last year's drab beds. Fat glossy buds burst, scattering the perfume of new leaves to mingle with the lavish scent of wild fruit blossom. The breath of the earth came round us as warmth and moisture unlocked the fragrance of the woods.

Our first summer was a glorious experience, surrounded as we were by interested neighbors, enthusiastic tenants, and happy youngsters. Our first tenants had come and gone. They told their friends and the friends came.

When Labor Day came every corner was full, and when yet more people came we vacated our little cottage for them, and happily spread a mattress on the floor of the garage.

What if we didn't sleep? We were launched in business! We began to realize the possibilities of our venture. We felt sure that here, we could best obtain any measure of health there might be allotted to us. We were happy, and we felt important.

The dwindling summer left me with only one desire. I wanted to stay, to rest and read and rest again through days and weeks and months—to drink my fill of winter sunsets—to wander through the woods—to wind myself into a cocoon of isolation, and wait for spring. Peter wouldn't hear of it. "What? So far from a doctor? You're crazy, woman!" was his answer to that. Finally I convinced him that a winter in the woods was exactly what we both needed. All the same, it was with forebodings that he began work on another cottage, winterizing as he built.

SEPTEMBER was a month of gleaming days, full of warmth and brilliance, freshening dew and soft mists. Morning after morning we stepped out of The Hovel right into the midst of a glorious sunrise. There seemed more color than the sky could hold, so it wiped its brushes on our hillside, and left color everywhere, on trees, on shrubs, and splashed on the path. The very air was full of it. The tang of that dewy crisp air was a cool refreshing shower to tired bodies. We snuffed our fill of it, and loitered over breakfast.

The days were magnificent, but the moonlight nights were pure wizardry. The moon drew etchings of tall poplars, and laid them across our camp trail. We heard the deer bound past The Hovel into the covering woods,



Bambi greets delighted small guests.

absurdly afraid, merely because he knew we were there. The loon's laugh was loud in the stillness; ducks chuckled complacently. The whippoorwill was riotously happy, pouring out his song faster and faster till he tripped over his own tongue. Then he rested, and started in again. Night or day — complete enchantment. The peace, the quiet, the beauty of the place saturated us with comfort.

In mid-October we moved into our winter cottage, and a feeling of security settled about us. Everything seemed in tune with our lives. The



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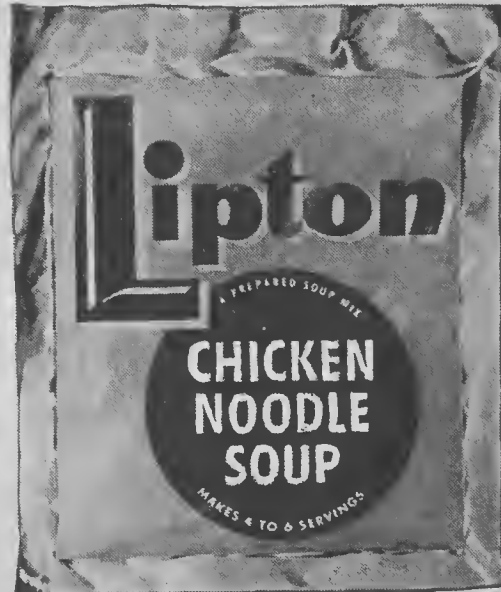
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winds could blow; the snow could fall. We greeted each day with eagerness.

We listened to the lake as it kept up a constant growling and complaining as the ice deepened. We heard great booms when the ice cracked. The hooting of the owl, the drumming of the partridge, the howl of wolves were the sounds we heard. The ticking of the clock gave us a new sense of time. We were fascinated by the infinity of winter storms. We gathered the nights of peace and content about us and wintered snugly.

Out of that first year we shaped the pattern for our lives here, and as our enterprise expands we enlarge the pattern. Camp has grown steadily, and we now have eight housekeeping cottages, an ice house, a boat house, and a permanent dwelling for ourselves. We have three wells of clear spring

water. Our beach is lively with four boats, a water slide for the youngsters, bright chairs and benches and an awning-covered seat for grown-ups.

There is much we miss from our city life. Though life here is simple, it has not always been easy. During our first six years our washings were done outside. We had no room inside for a gasoline-powered machine. Skies are not always blue when soiled linens mount. We have repeatedly been thrown on our own resources, but Peter's ingenuity invariably rescues us and on we go.

We have marched right alongside Manitoba in a steadily increasing tourist business. As we whittled away at our piece of wilderness, and added cottage after cottage, the province has carefully scrutinized holiday and tourist areas. Roads were improved, and

finally, in 1954, a hard-surfaced highway reached us and stretched across our 60 acres on its way to Grand Beach. Electric power lines came.

Aware of the risk in our winter isolation, we did not wait for the province in the matter of a telephone. Peter and our good friend, Claude Brereton built our own little "bush telephone line" to connect us with our nearest neighbors. It is a wonderful contraption which took the dangerous edge off our isolation. Invigorated with this defense we felt like the famed mouse of old who struck his chest and boldly cried, "Bring on your cat!" But not satisfied to let it rest there, we applied for telephone service. And lo! the miracle happened! The world is on our doorstep!

We can claim no foresight in our choice of this location, yet had we

known what the years would bring we could not have chosen better. We are in the midst of Manitoba's lake area, but nowhere could you equal our little spring-fed lake. Our register proudly establishes the fact that people come from Campbell River, from Vancouver, Edmonton, Calgary and Saskatoon, from Brandon, Neepawa and Reston, Fort William, Toronto, Ottawa and Montreal, to holiday at Walden Wood.

There is no measure for success in such a life as ours. Our success is in work well done, achievement in spite of our years, in good living—full of the richness of experience that people bring us, the satisfaction of financial rewards, in the happiness of creation and fulfilment.

Living close to the earth contentment has come to us in our Place Beyond the Hill.



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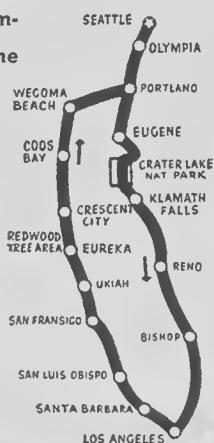
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GREYHOUND

Tooth-Brush Tricks

A FREQUENT complaint of homemakers is that small, irritating household tasks seem to consume an endless amount of time and energy. One of the handiest helpers in the "small job" field is the family's old tooth brushes. After their tenure of office in the bathroom, tooth brushes have a whole new life ahead of them as cleaning agents. A recent survey by a chemical company listed 222 different jobs a tooth brush could perform with ease and efficiency. If your old tooth brushes are made of nylon you can be assured of even longer service since nylon bristles are strong and hard-wearing.

The advantages of a tooth brush for cleaning toasters or sewing machines is fairly well known. And there are practically no electrical appliances around the home that don't have a spot or corner that's difficult to get at and to clean. Frequently a tooth brush is the answer.

The mortar between the tiles of a fireplace is another cleaning problem that lends itself to tooth-brush care, as do tricky corners of windows. Picture frames are easily cleaned with a tooth brush, while intricately patterned silver that seems impossible to clean with a soft cloth, responds readily to the tooth-brush treatment. When it comes to children's toys, this method again is helpful.

Even the handle of the old tooth brush can be a helper around the home. With slight alterations it may become a non-conducting screw driver, a letter opener and used as a hole-maker for garden seeds.

An old tooth brush can be a handy tool indeed. Let's take advantage of it.

On the artistic side, a tooth brush can be used to create very lovely and unusual "spatter" paintings. Cut carefully from a magazine or old Christmas or birthday card an object which shows a clearly defined outline, such as a rabbit or fir tree. With straight pins tack the picture in position to a piece of paper or cardboard. Then mix some water color paint—any color will do. Dip the tooth brush into the color and rub the brush over a piece of fine wire screen (a strainer is good). The paint will be distributed over the paper in a spattered effect. Spatter painting is fun for children on rainy days and many adults make their own Christmas cards using the tooth-brush method.

Here Comes the Bride



No. 1461—For the happiest of days, a graceful princess wedding dress with V-neckline, short drop sleeves and full, full skirt. Dress may be made floor length with long tapered sleeves. Same basic pattern is suitable for bridesmaids' dresses. Pattern for headdress and veil included. Sizes 11, 12, 13, 14, 15, 16, 18. Size 14 requires 6½ yards 36-inch material. Price 50 cents.

No. 1460—Going away ensemble. Slim fitting torso style dress has high square neckline at front, becoming V-shape at back, full, bouffant skirt. Easy-swinging coat shows ¾ length sleeves and small, pert collar. Sizes 11, 12, 13, 14, 15, 16, 18. Size 14 requires 11 yards 36-inch material for dress and coat. Price 50 cents.

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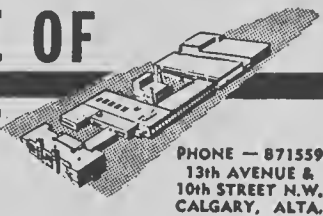
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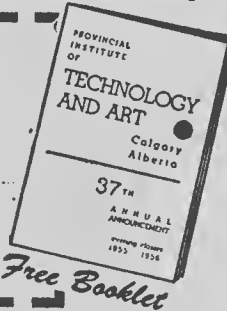
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BABY'S OWN TABLETS

A Face Lifting

*Changes in a material way, must and do come,
as I found when revisiting our old farm house*

by ANN BAKER

OUR farm house in northern Alberta is celebrating its 35th birthday this year. I wonder if it is overawed by all the changes that have taken place within its walls.

After an absence of 15 years I could not imagine what to expect. I pictured the old house and furniture we had known as children.

We stepped into what had been our "back kitchen." I began my search for something familiar. This was where I had spent many hours piling wood into the large box Dad had built in the corner. What I now beheld bore no resemblance to our back kitchen. There where the wood box had been now stood a beautiful electric range.

Our basement had been a hole in the ground which had been boarded up. It was there that we had buried vegetables in bins of sand in readiness for the long, cold winters. It was there that Mother had stored row upon row of home canned fruits, vegetables, pickles, jams, and jellies. Where the fruit shelves had been now stood a home freezer filled with frozen foods of the same varieties Mother had canned. Perhaps the old house wondered what the younger generation was coming to the first time it saw them freeze perfectly good food.

We climbed the stairs to continue our tour. Someone flicked the lights on. My thoughts flitted back to the coal oil lamps we had known. Gone were the days of wick trimming and globe shining.

The kitchen had been completely transformed. The modern cabinets, double sink, refrigerator, and automatic washer and ironer had driven out such old friends as the enamel dish pan, the ice box, wash tubs, and wash boards, to say nothing of the sad irons we had toted from stove to ironing board and back again.

A lump came into my throat as we turned to the dining room. The swinging doors that I had loved had been replaced by a modern fold-door. The round table and black leather seated chairs that I had thought so beautiful had long since been sold. In their place stood a limed oak suite. I said nothing but I couldn't help but feel that the old chairs with the shiny rivets in the black leather were more inviting.

The new furniture, alterations and decorations in the living room told what to me seemed to be the same sad tale. Nothing was left of my childhood home. I glanced at the heat registers and remembered the sound of the wood crackling in the Quebec heater, and the hissing of the flames as they leapt up the black pipes bringing warmth to the rooms above.

I went upstairs to what had been my room, hoping that they had left the chimney corner where I had hidden my childish treasures. Such was not the case.

Our tour neared an end. I felt my brother's disappointment that I had not exclaimed over all the wonderful changes he had brought about in the old house.

I was pondering as to what to say when we entered the hall. It was then that I saw them!

"Thank goodness," I murmured, for there in the front window were the little stained glass panes I had always called my colored pictures.

"It's wonderful!" I said with feeling. My brother smiled happily thinking I had referred to the remodelling.

My brother's four children burst in with shouts and ripples of laughter. My heart sang. I realized that although the stained glass panes were the only specially remembered features of material things that remained; the old house was still the scene of happiness it had always been. Its face has been lifted but its heart remains the same. V

You Look Tired

DO you enjoy being told that you look tired? Of course you don't.

Nobody does, except perhaps those who enjoy poor health, and like to rest themselves while somebody else does the work and waits on them. I have a friend who often tells me I'm not looking well. Sometimes when I am feeling quite as well as usual—when I am fairly pleased with my appearance—think I'm looking quite perky—she fixes her eye on me and announces out of a clear sky, "You look tired." Immediately I have a mental picture of myself looking weary and worn.

It is not really a good thing to tell anyone. There's a story about a man whose friends decided to experiment with him. One after another they met him on the street, stopped to chat, then asked him if he were not feeling well, told him he looked pale and seemed to have lost weight. Before long he began to think he wasn't feeling just right—perhaps there *was* something wrong. So he went home and to bed.

There's a story about two psychiatrists who made a trial of their science (if psychiatry is a science) upon a man who had been condemned to death for committing a crime. Having obtained permission to experiment, they told him he could be bled to death. They blindfolded him, laid him on a table, scratched his arm, saying they were opening a vein. They dripped water at blood heat over his arm and allowed it to fall into a basin so that he could hear it. From time to time they examined him, felt his pulse, listened to his heart-beat, remarked to each other in low tones that he was growing weaker, that the end seemed near.

At last it became quite evident that the man would really die if they proceeded. They then revived him, having demonstrated at least to their own satisfaction, the power of mind over matter, even to the point of death. That's the story. It isn't *my* story and I don't vouch for it, but I have no reason to believe it isn't true. At any rate I don't like being told I look tired and I don't believe it is a good thing to tell anyone.—Isabel G. Ringwood. V

The Country Boy and Girl



Long ago the roses used to grow on bushes that had no thorns. But the squirrels and mice used to climb after them, the cattle used to knock them off with their horns, the possum would twitch them off with his long tail, and the deer, with his sharp hoofs, would break them down. So the brier bush armed itself with spikes to protect its roses and declared eternal war on all creatures that climbed trees, or had horns, or hoofs, or long tails. This left the brier bush at peace with none but Molly Cottontail, who could not climb, was harmless, hoofless, and had scarcely any tail at all.

In truth the cottontail had never harmed a brier rose, and having now so many enemies the rose took the rabbit into especial friendship, and when dangers are threatening poor bunny he flies to the nearest brier bush, certain that it is ready with a million keen and poisoned daggers to defend him.

The Legend of the Brier Bush—as told by Ernest Thompson Seton in Wild Animals I Have Known.

Two Cowboys

by MARY GRANNAN

DAVEY CARSON couldn't believe his ears. His mother had refused to give him her clothesline for a lasso. Mrs. Carson laughed at the dazed look on Davey's face. "But don't you understand that I need my clothesline?" she said. "How could I hang clothes to dry, if I had no line?"

Davey solved that problem quickly and easily. "You could hang them on the fence, Mum. The fence goes all around the garden."

Mrs. Carson shook her head. "I could not hang them on the fence. The clothespins would not fit the fence, and besides, the fence is not clean. Can't you be a cowboy without a lasso?"

Davey sighed. His mother just didn't understand that to be a cowboy one needed a horse, a saddle, a ten-gallon hat, and spurs, chaps, neck kerchief and a lariat. He had none of these things, but he'd been willing to settle for the clothesline as a lariat. "I can get along without the other things, Mum," he said, "but I was going to rope dogies. They're little orphan calves, you know. How can I rope if I haven't got a rope?"

Mrs. Carson was not moved by his renewed pleas. "The dogies were going to be pretend dogies, weren't they?" she said. Davey nodded. "Then I'm afraid your rope will have to be pretend rope."

Utterly discouraged, Davey went out doors. Polly Pepper, who lived next door, was skipping on the sidewalk. As she jumped through the skipping rope, she chanted,

"Hippety hop, hippety hop,
Over and over and I never stop.
Pepper and salt, sugar and tea,
Seventy, eighty, one hundred
and three."

Polly saw Davey, and breathing heavily from her skipping, dropped the rope and sat down on the curb. "Hello, Davey," she said, "I've skipped a million, almost. I don't think I ever want to skip again."

Davey looked at the rope that lay like a lazy snake on the sidewalk. "If you're never going to skip again, will you give me your skipping rope?"

"Why should I?" asked Polly. Davey must have a reason, she thought, for wanting the rope. She wasn't going to give away a precious possession until she found out that reason. He was slow in telling her, but finally gave in.

He knew that he would have to tell, if he were to get the skipping rope as a lasso. "If you must know," he said, "I want it for a lariat. I'm going to rope dogies in the park."

Polly knew about cowboys and dogies, and wanted to join in the game. "I have another skipping rope," she said. "It is longer than this one. I'll give it to you, if you'll let me play with you."

Davey's lip curled and his nose went up. "Oh," he said, "why do you want to play? If I should run into cattle rustlers, you'd be afraid."

"I would not," said Polly, with indignation. "And if you don't let me play, you won't get the rope."

Polly played. The two cowboys went to the park together. They mounted their pretend horses, near the fountain, and went galloping over the pretend range and into the sunset. They found no dogies. "I reckon we should rest our horses, pardner," said cowboy Davey, after they'd circled the fountain five times.

"I reckon we should, pardner," said cowboy Polly. "I reckon I'm plumb hungry. There comes a chuck wagon with ice cream. I reckon we should get some."

The ice cream man laughed merrily as he served them. He shook his head. "I don't reckon you'll find any dogies here on this range," he said. "If I were you two cowpokes, I'd hightail it over to the blue spruce country, beyond the geranium beds. More than likely you'll find some strays over there."

They thanked the ice cream man for his advice, and went galloping off to the blue spruce. As they neared the clump of nicely trimmed blue spruce, they heard a sound. It came from the geranium bed beyond.

"Moo! Moo!" came again.

Polly and Davey looked at each other. "That sounded like a real dogie," said Polly, "and we're just pretending." They ran behind the spruce trees, and there stood a little brown calf. Polly shook her head. "It can't be real," she said. "We just imagine we see it."

"We'll touch its back," said Davey, "and if it moos and moves, it's real." He stretched out his hand and touched the sleek back of the calf. It moored and moved.

The children laughed, delightedly. "I'll rope it," Davey said, "and you ride it home. We'll make a corral for it in the garden." It was not difficult

to lasso the calf. It stood quietly while Davey slipped the skipping rope over it. He then helped Polly to mount the little animal, and off they went toward home.

Davey's mother couldn't believe her eyes when she saw the two pretend cowboys coming down the street with a calf. She went to the back door, and called Polly's mother.

The children came proudly up the driveway that ran between the houses. "We're going to build a corral in the garden, Mum," said Davey. "Is that all right with you?"

"It is certainly not all right with me," said Mrs. Carson. "Who owns that calf?"

"We do," said Polly. "We were hunting pretend dogies, and all of a sudden we rounded up a real one. He's ours."

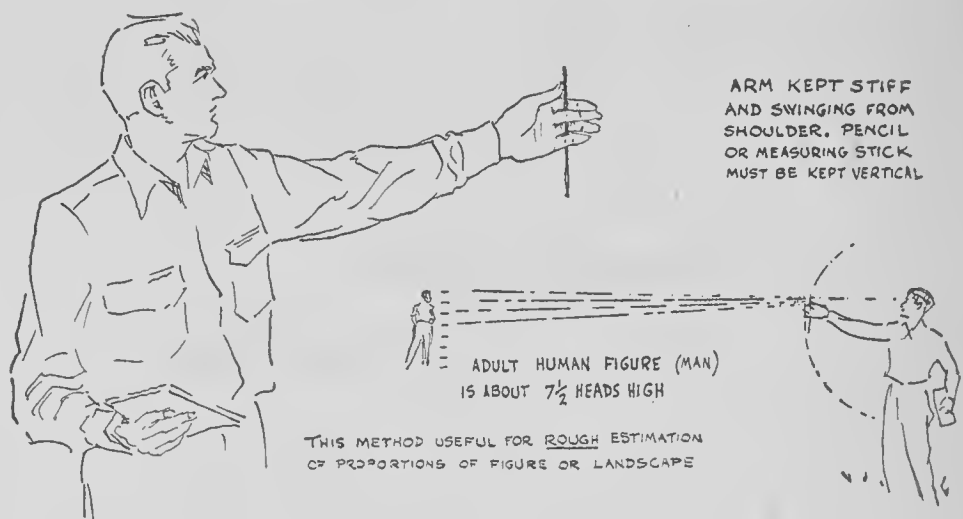
But Mrs. Pepper and Mrs. Carson thought differently. They called the police, who told them that the little dogie, which had feasted in the geranium bed, had wandered away from a rodeo that was showing on the edge of town.

That afternoon, a big cowboy wearing a real ten-gallon hat, fringed leather jacket and silver spurs, came for the dogie. When he heard all that had happened, he invited the children to be his guests at the big Wild West show. "I reckon you two cowboys might like to ride a couple of pintos in the parade around the ring tonight?"

Davey and Polly reckoned they would. And they did. Wearing ten-gallon hats and fringed leather jackets, they rode in the Wild West show. ✓

Sketch Pad Out-of-Doors

No. 52 in series—by CLARENCE TILLENIUS



PREVIOUSLY we have discussed the difficulty of making a start on a landscape drawing, or objects in a landscape scene. Drawing is so much a matter of correctly judging proportions of a subject or relative distances between different points in a landscape, that a reasonably simple method of determining these measurements is most important to the artist.

It is possible to judge these measurements with the eye alone, but it requires much experience in drawing. The method shown in the sketch is simple, and with it one can roughly judge proportions.

First decide how much of the subject before you is to go into the drawing and how large that drawing is to be on the paper. Now—holding a pencil or brush (a knitting needle is still better) vertically at arm's length, as in sketch, slide your thumb up until the distance between the top of the pencil is equal to some portion of the chosen scene.

Let us say, the subject is a meadow with a man standing in tall grass. The drawing is going to take in the man, sky above him equal to his height (top of his head to grass tops), depth of foreground also equal to his height. You then divide the height of your proposed drawing into three equal spaces and mark them off on a vertical line. The man will be the height of

the center space. Now divide the man's height by "head lengths" (measured on sketch). Remember that though the average man is seven and one-half heads high, this man is standing in grass, and you must only mark off as many head lengths as you can see.

To measure his width, use the same head-length unit, but hold the pencil horizontally. Keep your arm stiff, swinging from the shoulder. Whether the pencil is held vertically or horizontally, keep it at right angles to the line of vision. Remember that your eye must remain in the same place while making measurements.

When you have the man correctly measured and marked off into the center space, go on to other features of the landscape, measuring and comparing in the same way. Try to use larger areas for comparison at the beginning, while blocking in the drawing, and subdivide them as you come to details. Do not attempt refined drawing at this stage. Just mark off proportions. When they are correct, drawing follows naturally.

Some artists hold at arm's length a card with a small square or rectangle cut out of it—and draw what is framed in the opening. It does not much matter how you make your measurements as long as you find a method that helps you to draw accurately. ✓

Superstition at the Stampede

Cowboys need all the luck they can get, to stay atop a raring, fighting, bucking bronc longer than the next best

by LYN HARRINGTON
Photos by Richard Harrington

ARE you superstitious? Leery of black cats and the number 13? If so, you've got lots of company, particularly among miners and sailors. Or, for that matter, men in any risky occupation.



No wonder rodeo riders are superstitious with mounts like this one to ride.

That includes cowboys on the rocking deck of a sunfishing bronc. I chatted with cowboys at the Calgary Stampede, and tried to pin them down on their private superstitions. They just scoffed at the whole idea.

"Naw, I don't believe any of that stuff." Then, a moment later, "Hey, look out. Bad luck to walk under a ladder!"

Although most are a little touchy about admitting it, the fact is that the rodeo cowboy adheres to all the usual superstitions such as black cats, ladders, spiders, salt, mirrors and horse-shoes. And adds a few of his own. Cowboy superstitions are highly personal, and can change at a moment's notice.

"One of their very special fetishes," an old Wild West rider assured me, "is never to look at the trophies before the contest. Some won't even let their wives study them. Course, that may be just so's she don't get to pestering."

Up goes the bronc, and then he comes down again with a spine-jarring thud.



Some cowboy contestants make it a point always to dress the right foot first. Practically every last man of them go along with the gambler's rule of never laying a hat on a bed; and setting it on dresser or table upside down, "to catch luck."

Often it's a battered old hat that looks as if some bronc had stomped on it. And likely that's what did happen. But the owner had good luck while wearing it, so now that hat hopefully goes with him in every rodeo event.

The same goes for a shirt or chaps, belt or narrow-legged levis. If a rider has good luck the day he broke in the new clothing, he's likely to attribute it to that particular garment. So he wears it next time, and it may win a reputation as his personal good luck charm.

CHAPS are preferred to any lucky rabbit foot, particularly if they've already been used to spank a friend on his birthday. (And what cowhand wouldn't bear with that for a pal?)

A pair of high-heeled cowboy boots may be the "wampum" that brings good fortune. If so, the cowboy will stick to those boots longer than the uppers will stick to the soles. He'll sew 'em, tack 'em, and lash 'em together with adhesive tape.

It may be even some item his wife wore for the first time, on the day he took the big money. So she's stuck with that old red hat, or worn neck-piece, until he quits rodeo business. And then the talisman is likely to be passed on to a pal.

One item ought to be banned from every rodeo performer's wardrobe, according to some. That's a yellow shirt. All the rest of the rainbow may be "chosed," and dudes may wear yellow, but it's bad luck out on the center-field.

I watched one bronc buster last summer at the Calgary Stampede reck-

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lessly brave the taboo. His horse slipped just outside the chute, and threw him. The cowboy wasn't hurt, so he got a chance to try again on another horse. Darned if the same thing didn't happen again! That ended his chance for the prize money.

There's no proof that the yellow shirt jinxed him. But a rodeo cowboy who has trouble the first time he wears anything new is likely to unload it fast, or even burn it. I'll bet that yellow shirt went up in smoke.

Another tradition, which doesn't disturb Calgary Stampede officials much, is the rider's aversion to the number 30. Since the broncs are all numbered, and the contestants too, there's a chance of getting that number, alright. But Canadian cowboys don't gripe about that. All they want is to dodge a number that hoodooed them on some previous occasion. The number 13 doesn't bother any of the boys.

As at any such event, panhandlers gather at the Calgary Stampede. But they don't have quite such easy pickings as at the Madison Square Gardens' rodeos. The bums long ago learned to play on a cowboy's pride and superstition, and they gang up around the entrance. It's just asking for trouble to pass a beggar with your pockets buttoned tightly. You can guess who promoted that idea.

But for all the cowboys' generosity, adherence to pet fetishes, and avoidance of black cats and their ilk, cowboys keep right on being tossed off the top deck of a bucking bronc. It doesn't daunt them. But they sure as heck won't wear those levis . . . or that shirt . . . or hat, or whatever . . . at the next Stampede. And that's for sure!

Farmers Say Shelterbelts Pay

Continued from page 9

been available as to the exact effect of shelterbelts on crops growing between them. Height was necessary before the effects could be studied to advantage. Also, because moisture conditions, and therefore yields, have been above, rather than below, normal, practically all of the time since the trees in the experimental areas have reached useful heights, it has been difficult to secure anything like conclusive data.

DURING the last five years, much more information has become available. In addition to the fact that shelterbelts seem definitely useful in checking any tendency toward erosion, or soil drifting, the investigations reported by W. J. Staple, and J. J. Lehane, of the Soil Research Laboratory at Swift Current, do not suggest appreciable decrease of evaporation from the soil resulting from the presence of shelterbelts. With respect to snow accumulation, these officials report drifts near the field shelters at Conquest, varying from 12 feet to 65 feet wide in different years, and an average depth from 6 inches to 45 inches. Similarly, in different years, maximum depth of snow near the field shelters, varied from 12 to 65 inches, whereas in the stubble in the center of the fields, the soil was bare in one year, and in another year it held 12 inches of snow. Not withstand-

ing these wide variations in actual depths of snow near the shelterbelts, the recorded snowfall over the five-year period, varied only by 15 inches, so that winds must have contributed largely to the variability of snow accumulation.

During the five-year period, 1950-54, yield records were taken in the center of a strip between shelterbelts, and at six other points on either side of the center. Averaging the results at all these points for all of the five years, and including the area occupied by the shelterbelts, the yield in the exact center between two belts was only .7 bushels per acre less than on the remainder of the 27-rod strip.

"The gain in crop yield, due to snow near shelterbelts," say these officials, "is greatest in years of ample snowfall, when winter winds have blown exposed areas bare. Sheltered fields show little net gain from snow, when the soil is saturated by autumn or spring rains, when the snowfall is well below average, or when the winds are light, and the snow holds well on the fields." They point out that in dry years, the areas of increased yield between shelterbelts remain about the same, but the yield near the shelter is greater relative to that in the center of the field, or in exposed areas outside the shelterbelts. They recall that in 1936-38, crops were harvested in strips along shelterbelts when those in exposed areas were a total failure. "The wheat crop requires five inches of water before any grain is produced," they remind us, "and even with seven inches or more, the crop might not be worth harvesting. However, if an additional inch or two of moisture was accumulated near the shelterbelt, it could be used with greater efficiency, and good yield would result."

IN 1954, a survey was made of farm opinion in the three provinces with respect to field shelterbelts, by the provincial departments of agriculture, who used a uniform questionnaire. Of 212 usable forms returned, involving 494 miles of field hedges, or 7/10 mile of hedge for each quarter-section reported, 160 reported on crop yield. Of these, two reported a decrease. There were 69, including 52 whose trees were planted since 1948, who reported no change, and 89, or 55.75 per cent reported an increase in yield. Eighty-six per cent of the same number reported decrease in wind erosion, and 22 no change, including 17 whose plantings were made after 1948. Nearly all, or 98.37 per cent, reported snow accumulation, and 56 per cent reported a decrease in water erosion.

The kinds of trees used on these farms, in order of popularity, were caragana, Manitoba maple, ash, poplar, willow, elm, and evergreens. The most popular distance between shelterbelts on these farms was 30 to 40 rods. Damage to hedges developed from many causes. Sixty-eight farms reported insect damage, 64 damage from 2,4-D, 43 some damage from livestock, in addition to other causes which included hail, water, frost, fire, grasshoppers, gophers, rabbits, mice, moles, sunburn, wind, soil drifting, too-close cultivation, drifted snow, and damage from machinery.

Not long ago, the Agricultural Experimental Station, South Dakota State College, issued a 16-page circular entitled "Good Windbreaks Help In-

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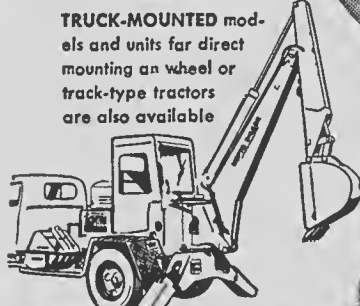
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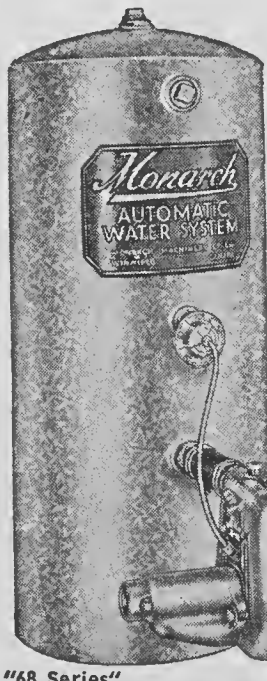
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crease South Dakota Crop Yields." It reported the results for a survey among 331 farmers, in 37 soil conservation districts in the eastern part of the State, and represented data for the 1952-54 period. Half of the 265 farm owners involved, had lived on the same farms for 25 years or more. Ten major crops and nine minor crops were involved, and approximately 85 per cent of the farmers estimated crop yield increases for one or more of the three seasons involved. In summary, the Station concluded that "The re-

sults based on three years' experience indicate that field windbreaks, where judiciously used and adequately maintained, will, over a period of years, increase crop yields sufficiently to more than pay for the land they occupy."

For further information about field shelterbelts in the prairie provinces, write now, for a copy of an illustrated 16-page publication entitled, "Planning and Planting Field Shelterbelts," to the Forest Nursery Station, Indian Head, Saskatchewan. V

He Plans to Cross-Breed Sheep

For years a breeder of purebreds, this Simcoe County breeder is turning to cross-breds and a commercial flock

THE sheep business is changing. The changes are apparent in many districts, through the dwindling number of flocks. They are also affecting the J. G. Metherall flock, at Glen Huron, in the steeply hilled and wooded part of southern Simcoe County in the Georgian Bay area.

As a boy, Joe Metherall found out what good sport was to be had along the rushing trout streams in the shaded valleys. He learned, too, that good livestock could turn the grass from the uplands into money, and that no animals were better at this job than sheep. Consequently, he has been breeding purebred Oxfords for years, and now runs a 50-ewe flock.

His flock is a partner enterprise with his herd of dual-purpose cattle, but a very important partner it is.

Gesturing to a hillside across the creek from the sheep barn that seemed to drop sharply from its towering rounded peak, he said that his father had cut grain there with a binder.

It looked like a risky job.

"But," he went on, "the land is fertile; grows lush crops of grass; and sheep are ideally suited to live on the hillsides."

Our visit was in March, and he led us to a small flock of yearling ewes, separate from the rest. They had wintered in the orchard without shelter. They hadn't received grain all winter, but had thrived on good clover

hay. The adult ewes, too, had wintered without grain until about lambing time. All were healthy.

"Sheep will help to keep brush down on a farm, too," he added. "Where the cattle graze alone, the pasture fields are growing up with wild apples and hawthorn bushes. Yet the sheep pasture is free of them."

TIMES, however, are changing, and fewer neighbors turn in the Metherall lane now to buy rams. Because they have sold their flocks, he is considering crossing his ewes with a North Country Cheviot ram to get hybrid vigor for commercial lamb and wool production.

Anxious to do his part to preserve the sheep industry, this young farmer has been working with Frank Stone, assistant agricultural representative in the county, in developing a 4-H sheep club. Keen interest seems to exist among the younger generation in wool and lamb production. Son Neil is one of the most ardent members, and he is well on the way with a nucleus of a flock of his own. He exhibited a fleece from one good ewe at the Canadian National Exhibition last fall, and it was a winner.

This is a 190-acre farm, much of which is too steep for grain growing. Mr. Metherall specializes in grass, getting good yields of high protein clovers, and markets the roughage through beef and dairy cattle and his valuable flock of sheep. V



Yearling Oxford ewes of the J. G. Metherall flock at Glen Huron, after a winter in the orchard on good clover hay, without any grain in the feed.

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Farm Notes from British Columbia

by P. W. LUCE

THERE is more potential British Columbia farm land in the Peace River district than in all the rest of the province, but settlement there still lags a long way behind opportunities. Settlers usually are not attracted by the semi-solitude of the empty wilderness.

J. S. Allin, Department of Lands and Forests, pointed out recently that less than one acre is under cultivation for every resident, and that this does not keep up with immigration. Occupied land is increasing at the rate of only 25,000 acres a year, about enough to support 10,000 persons.

The cropped area of British Columbia is growing annually by only 8,000 acres, and potential farm land is estimated to be 4,615,000 acres, of which only 968,000 acres are in crop, or a little more than one-fifth of the total.

The total investment in farming in the province is \$408,266,000, and the annual output is \$127,000,000. Crops of various kinds bring in only about one-third of the revenue, while livestock and livestock products account for the remainder.

One pleasing bit of information released by Mr. Allin is that three-quarters of the farms carry no mortgages.

THE average milk production per selected cow in British Columbia has been steadily improving over the past 20 years, though there was a slight drop in 1954 and 1955.

The Dairy Branch of the B.C. Department of Agriculture reports that there are now 11,278 cows recorded in herd improvement associations, which, in the past year, averaged 9,438 pounds of milk, and 395 pounds of butterfat. At four pounds of butterfat to five pounds of butter, and 2.5 pounds per quart of milk, the average increase per cow since 1935 is 615 quarts of milk and 70 pounds of butterfat (87.5 pounds butter) per cow, on the average.

Nearly half the cows on test are Holsteins. The figures are: Holsteins, 44.3 per cent; Jerseys, 21.6 per cent; Guernseys, 19.1 per cent; crossbreds, 10.8 per cent; and Ayrshires, 4.2 per cent.

A REPORT on the B.C. beef industry has been prepared by E. L. Menzies, a University of British Columbia economist. This will soon be available in printed form.

Mr. Menzies shows that the B.C. rancher markets most of his stock when prices are lowest, because of heavy Alberta imports. He does not suggest any adequate method by which the Cariboo rancher might improve existing conditions. Cattle have to be marketed when they are ready, and it would be uneconomical to hold them over for a higher price.

One suggestion is that payments be made on dressed carcasses, instead of live grading. Cattlemen question whether this system would be of much advantage to them, though it may look all right in theory.

Mr. Menzies' conclusion is that producers are paid approximately four per cent less for heifers, than for steers, but that there is no difference

in the price charged to the housewife when she buys meat from her butcher. If there is any sensible reason for this, says Mr. Menzies, the information should be passed on to the rancher. Slaughter loss on heifers, however, is said to be approximately two per cent greater than on steers of similar age and finish.

Permanent Pasture Cuts His Dairy Costs

PERMANENT pasture has been the main crop used to cut costs on the Doug Ross dairy farm at Sherbrooke, Quebec. For example, about 35 acres of the 100 acres that are tillable on the home farm are down to improved grasses and are top-dressed every two or three years with 300 pounds of fertilizer. This, along with more rough pasture, offers grazing for more than 30 Ayrshire cows during May, June, July, and part of August, until the herd can be turned onto the aftermath growth of the meadows. Then the pastures are rested until the following year.

Despite a fluid milk market which takes over 80 per cent of his milk at \$4.40 per cwt., basis 3.5 per cent milk, costs must be watched closely. Thirty acres of grain are fitted into his crop rotation along with 10 or 12 acres of corn. Both crops are dressed with 150 to 200 pounds of fertilizer to the acre. Further, grain also must be purchased from the feed mill in town, which adds western grain to his own, and mixes a 16 per cent ration for him.

Mr. Ross runs a flock of ewes as a sideline on the farm, and as many Quebec farmers are doing now, is turning to the Cheviot breed. Even though he makes a determined effort to have his farm pay for the investment he has in it, he is grateful today for the gravel pit on his farm, which provides extra income.

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Strip Farming And Shelterbelts

*A dryland farmer in an irrigation area,
Louis Stotyn sticks to grain crops*



Varying width of strips on differing soil types, on the adjoining farms of Louis and Bill Stotyn, situated along the north bank of the Oldman River in Alberta.

FIFTY-TWO years as a dryland farmer in the Fort Macleod area of southern Alberta has taught Louis Stotyn the value of strip cropping. He passed the practice on to his son William, who owns the farm next door, and now their combined property stretches like a huge striped awning along the north bank of the Oldman River. In 1904, when the elder Stotyn first arrived in the district, as an eager 19-year-old, it was all cattle country. Louis was one of the first settlers to take up the plow and start farming. When the topsoil began to lift skyward in big black clouds during the early 1920's, Louis and his neighbors didn't give up farming, as some did in other dry areas. Most of them, however, did give up the plow as an implement of cultivation. In its place they used the disk and cultivator; and found that these gave them a good seedbed and still left enough trash on top to keep their land from blowing.

"About the only time I use the plow these days," Louis said, "is once every four or five years, to break up the shallow hard-pan layer formed by the cultivator blade."

About that time a couple of farmers in the district decided to give shelterbelt protection to their grain crops. If a strip of trees around the farmstead could cut down wind, strips of growing crops through the summerfallow would work the same way. The idea caught on like wildfire. Soon the broad fields of grain and fallow gave way to alternating strips of black and gold, a pattern that has held pretty steadily to this day.

"I've had good crops and poor crops," Louis admitted. "But I've never lost a crop since."

When the "dirty thirties" brought more blowing, and many abandoned farms on the prairies, the strip-croppers along the Oldman River kept their soil, and so kept their farms.

Asked about the varied width of the strips, Mr. Stotyn explained that they generally gauge this by the type of soil. Where the soil is light and drifted easily, 10 or 20-rod strips are used; on heavier land, they make them from 30 to 40 rods. Sometimes the moisture content at cultivation time was the deciding factor.

Although he's a dryland farmer, Louis is actually located in an irrigation district; a full irrigation ditch runs to his north boundary, and a broad river bounds the property on the south. But irrigated crops, such as sugar beets, take a lot of labor; and out of a family of ten boys and two girls, only his son Bill elected to farm. Louis prefers to stick to grain crops, and rely on strip cultivation and trash cover to conserve enough moisture to carry him through. They have never failed him yet.

"You know," he observed, pointing out over his fields, "those strips are not only good for the land, but they look nice. Don't you agree?"

No Part-Time Farming for Them

TRAVEL along the concession road where Albert and Lewis Hussacks farm at Caledonia, Ontario, and you'll find a good many part-time farmers now. Industry is providing jobs to draw them away from the farm. They continue to live there and work it in their spare time to supplement the factory wages. Such an arrangement is difficult to resist in these days of low prices.

But the two brothers have no desire yet to trade their farms for the confinement of factory work. Their resistance to such a pattern has been bolstered by the well-worn pencils in their desks, where they have been figuring and planning unceasingly to stay ahead of the tightening farm economy.

They have utilized a trick that is becoming more popular these days—a partnership through which they can reduce costs and boost their efficiency. They live on adjoining farms and work together. One set of buildings houses a 30-cow dairy herd. The other is equipped for the hog enterprise where they feed off 200 or 300 hogs a year; and for the 200- or 300-hen laying flock, which meet the needs of the customers on their egg route.

The brothers have faced the formidable job of building their soil and developing their farm, while making the land yield the capital to do it.

Now they have 170 acres under cultivation, rent another 80, and are toying with the thought of buying still more to expand the size of their business.

Their secret is a high turnover of livestock. They buy hogs, as well as corn and other grain to feed them. They even buy hay. Now they are considering using a beef-type bull on the dairy cows, to produce beef-type calves that can be fed off at a better profit.

Although the Hussacks have a fluid milk contract in town, hauling the milk themselves, much of the milk produced in the area goes for manufacturing. As a result, they can sell their own production at fluid prices, and buy back milk powder as a protein supplement for the hogs.

They mix their own grains with the milk powder at a ratio of 10:1, and slop feed. They get about 50 per cent Grade A carcasses. Colored hogs, which invariably form part of the litters they buy, create a major problem, because these cannot make top grade.

With a high concentration of livestock, they can manure nearly 100 acres of land a year. They buy up to \$1,000 worth of fertilizer as well, and by tying in these soil-building practices with long-term crop rotations, they have gone a long way in building soil fertility. Yields of 70 or 75 bushels of barley are not uncommon now.

Dirt! Only Dirt!

by ALICE CLEMENT

YESTERDAY, I was transplanting seedlings, when my neighbor from beyond the orchard came in. "Oh what have you there," she cried, as she saw the large box of earth on my working table; and I replied, "Oh dirt, just dirt." We exchanged items of news and flower seeds and, after she had gone, as I continued sifting earth, and adding sand and fertilizer, I began to think about dirt.

The earth that I let fall through my fingers, what was its history? Perhaps it was once the trunk of some giant tree of the primeval forest, or the dust of a proud Indian Chief, or prehistoric king. The sand—was it scoured from the rock when the ice cap covered the continent? What beautiful flowers, rare perfumes, or luscious fruits, what stately trees, or giant animals, what pomp and magnificence may have contributed to those few handfuls of dust.

And what a potential thing is earth! I commit to its care the little brown seeds, dried-up, lifeless-looking things; and Earth takes them to her bosom, and in partnership with rain and sunshine, works her magic—and lo, we have green living breathing plants. Again, she waves her wand, and the dull, brown earth—just dirt—bursts into a gorgeous riot of color, sweet peas, snapdragons, asters, the snowy whiteness of the angel's trumpet and the velvety texture of the pansy.

Dear old Mother Earth! How tender she is to the little, clinging, groping rootlets, giving them just the nourishment they need.

As I walk the garden paths in my flat-soled shoes, and feel the soft, warm, friendly ground beneath my

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feet; or go down on my knees, weeding the peas and onions, or digging in the flower borders, I feel a sense of gratitude welling up in my heart. How good it is to get close to the earth, the kindly, generous earth, that provides so bountifully for her children. I see evidences of it on every side, the shining wheat just over the fence, the clover down in the hollow, the fruit forming on the orchard trees, the strawberries growing red among the vines, the crisp, green lettuce, crimson beets and yellow beans. What a banquet is spread for our enjoyment!

Yet, how ungrateful we are, we children of dust, with our concrete walks and pavements, our skyscrapers and what not, all trying to get away from the earth, which we spurn! Per-

haps that is what is the matter with our civilization. It has got too far from the ground, and become top heavy, leaning at a perilous angle, like the tower of Pisa.

We women, with broom and duster, wage one continual war with dirt, and what a losing conflict it is! The room, we cleaned so carefully today, is just as dusty tomorrow. The soil, we removed from the floor this morning, serenely awaits our broom this afternoon. The muddy clothes we wash are soon dirty again. Then, when we have fretted and fumed our little hour; when we have fluttered our duster for the last time, and passed from the stage, Mother Earth receives us to herself. We are buried in dust; and, at last, in common with all flesh, we become dirt, just dirt. V

Watch Out For Poison Ivy

Found in every province except Newfoundland, this poisonous plant if carelessly handled may cause much misery

by **GEORGE A. STEVENSON**

THE best way to avoid poison ivy is to recognize it on sight. It may be a low, single-stemmed, or bushy shrub, or a trailing, climbing, or twining vine-like plant, and it is most easily recognized by its leaves, which are arranged alternately along the woody stems. The leaves are divided into three distinct leaflets like a clover, or strawberry leaf. Each leaflet is from two to four inches long, broadly oval in outline, pointed, wavy margined or with a few irregular teeth, firm or sometimes leathery, strongly veined and bright green, or richly colored in the late summer and fall. The flowers are inconspicuous, and the fruit, when present, is a small cluster of greenish-white berries each less than one quarter of an inch in diameter.

In the prairie provinces, the climbing type is replaced by a non-climbing variety, with a short, woody stem, rarely exceeding 20 inches in height. The long-stemmed leaves—usually three in number—appear to rise from the same point near the tip of the stem and are never arranged alternately along it, as in the taller species so common in the East. This short-

growing variety is found also in British Columbia, and occasionally in Ontario and Quebec. The leaves of the two varieties are alike.

The plant thrives under a wide variety of conditions and in all kinds of soils. The poisonous principle, urushiol, is present in all parts—leaves, stem, roots and even pollen grains—and direct contact with the plant is unnecessary. Susceptible persons have contracted poison ivy from the fur of pets, picnic baskets, cloths and tools that had been in contact with the plant weeks, or even months before. The smoke of fires in which the pest is being burned can affect those who inhale it if they are very susceptible.

Symptoms usually begin to show 12 to 48 hours after contact. In mild cases, an itching of the skin develops, which is followed by water pimples which tend to spread. In more severe cases, the skin becomes much inflamed with oozing sores and scaling, and is very painful. The ailment usually runs its course in about two weeks and, contrary to widespread belief, the recurrence of poisoning symptoms does not take place from year to year without fresh exposure.

Desensitization inoculations, and some lotions give a degree of protection if taken or applied before contact with the poison. If you do come in contact, or even suspect it, wash the exposed part thoroughly with a good alkaline laundry soap to remove the poison. Washing should be done within an hour or so from the time of exposure, if that is possible. A mixture of alcohol and water, or even gasoline, may be used in an emergency. However, if the appearance of watery blisters is the first indication of contact, avoid rubbing and bathe the affected part in a solution of bicarbonate of soda, or magnesium sulphate—about two or three teaspoonfuls to a cup of water. Avoid powders which may cause a crust to form and only aggravate the condition. If the poisoning is very severe, medical advice should be secured. V



[G. A. Stevenson photo]

Poison ivy stores the poison in its leaves, stem, roots, and pollen too.

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Greater efficiency and increased hog production are the aims of the Shantz brothers of Ontario



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THE program followed by Shantz Bros., at Kitchener, Ontario, with their 56-sow swine herd, contains several ideas which might be useful to many hog producers. Although conducting an enterprise that will turn out 1,000 hogs per year, they are experimenting with several phases of it, in attempts to cut costs and improve efficiency.

For instance, the farm had a big square barn, one of those old ones that are obsolete in so many ways. So Frank Shantz had the stabling torn out of it, even knocking out one wall and leaving only the posts.

Running out from this wall space is a concrete platform. He divided the barn into separate pens, running from the back right out to the platform, walling off a sleeping area at the very back of each one, and setting up the feeding area just under cover of the open front. The platform is left, as an exercise area. Under these cool but dry conditions, pigs have been thriving for two years now.

In fact, all the pigs on this farm are plied with fresh air, and the cost of housing is kept at a minimum. Dry sows live in an open shed, bedded deep with straw to keep them dry. Jute sacking is hung part way down over the open front to prevent snow from drifting into the bed. However, the sows must walk to the far end of the runs to eat chop from the self-feeders, or the fresh green alfalfa that is always before them, or to drink from automatic heated water bowls.

THE work arrangement is interesting too. An attempt is made to have all sows farrow together. This is accomplished by regulating weaning time, so they will come into heat together. Then, in a three-week period, all sows are bred. If any are missed in that time, unless they are extremely good ones, they are culled out. The reasoning behind this, of course, is that if a man must stay up at night with one sow, he might as well have several to watch.

Since he is aiming at an average of ten pigs per litter, special care is important immediately after birth. Each pig has his needle teeth cut out at birth and is placed under heat

lamps. The litter is weighed up and the weights recorded, once all are born, and the information marked up in the sow's record. Later, the number and weight of pigs in the litter weaned will be recorded, too; and finally the number of pigs marketed, and the grades they made. This information is later used when the sows that are to continue in the breeding herd are selected.

Even while nursing, the sows are fed outside in winter. Young pigs are provided with creep feed once they are a week old, and are castrated and ear-notched for identification a week later.

Ship Doubles Normal Grain Load

Biggest ocean grain freighter to load at Montreal takes a record cargo of wheat to Western Germany

THE *Ionian Messenger* took on the largest ocean grain export load to be carried in one ship out of Montreal, when it loaded 718,480 bushels of No. 4 Northern wheat at that port on May 10, and sailed for Hamburg, West Germany. This compares with an average of 375,000 bushels for other ocean freighters. Its total weight, including fuel oil, water and stores, was 20,512 tons, or nearly twice the average.

Built in 1953, the *Ionian Messenger* flies the Liberian flag. Its over-all length is 579', width 74' 4", and draft

Have You Heard These?

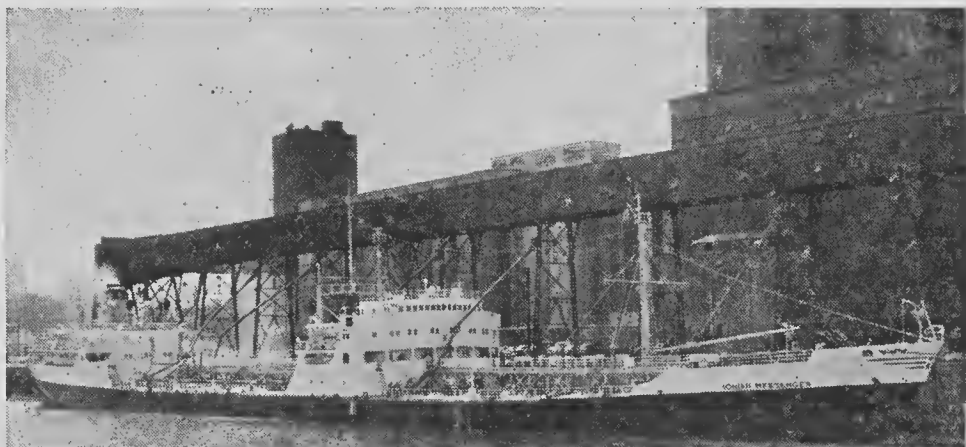
by DON J. MacLEOD

A unique method of delivering poultry feed in water-proof bins has been inaugurated by a California feed company. The bins have two compartments, each of which hold 1¼ tons of feed. Bins are hauled (two at a time) direct to the poultrymen, and can be placed anywhere on the farm. The use of bags is eliminated, as poultrymen run their feed carts under the bins for filling. Empties are hauled back on the return trip.

When Canadian gardeners purchase vegetable seeds they may not know it, but the seeds they purchase are subject to test as to trueness to variety and type. These tests are made by officials of the Plant Products Division of the Canada Department of Agriculture, assisted by several colleges of agriculture.

Those interested in growing beans will be interested in a new mechanical pole setter that has been invented by Fred Maloney, a Yakima, Wash., bean grower. This setter drives bean poles 2½ times as fast as any previous setter. The machine also ties the strings. It was used successfully by several large growers in the Yakima area.

Bovine brucellosis has always been a problem in the dairy industry. Tests by U.S. veterinarians now show that brucellosis can be spread by artificial breeding. A brucellosis-infected bull was used as a herd sire and during a three-year period did not infect any cows. However, when the bull was taken to another herd and used in artificial breeding, the cows became infected.



With twice the average capacity of other ocean grain ships, the *Ionian Messenger* set a new record for a single shipment of grain from Montreal recently.

Learn to Outsmart Your Dog

by MARGUERITE M. TOLTL

DOGS are smart. We humble humans are forced to acknowledge this. We have learned it from both sweet and bitter experiences.

As a matter of fact, most dog-owners have learned this lesson so well that they are willing to wager their "best friend" is the smartest little old canine in the entire neighborhood!

Didn't that supposedly "dumb" animal chew up your slippers the last time—simply because he heard you complain that your feet were killing you?

That's what I mean!

So, here are a few practical tips that may help you outsmart your dog into letting you both lead a better dog's life!

First of all, it is important to watch his weight. And, as he probably isn't interested in that little fortune-telling card that induces most humans to step on the scale—here is how you can outwit him into getting weighed. Step on the scales yourself, then pick up your pooch and take the combined weights. Subtract your weight (oooooh, *that* much) from the combined reading, and the result is the avoirdupois of your dog.

And, does your dog drink enough water? The minimum daily requirement for a normal adult dog, in good health, is, approximately, one-third of an ounce per pound of body weight. So, if your dog is a total abstainer, you will have to trick him into it because it is much better for him to drink more than he needs than less.

Here's how!

Put fresh water in a clean dish and set it out first thing in the morning. Replace it every half hour, if necessary. The idea is to arouse his curiosity enough that he will sample the contents of the bowl each time it is replaced. Nine times out of ten he will lap up a bit of water with each investigation.

IF your dog is a door-jamb chewer, you can outsmart him with this simple trick.

Make a fringe of several lengths of coarse, knotted twine and hang it along the door as high as the dog can reach. Each time the dog gets the urge to chew the door, the twine dangling so invitingly, will distract him. Usually, he will chew the twine, decide it doesn't taste as good as it looks, then abandon the whole project and walk away in disgust.

If your dog is in the habit of pushing his plate around the floor while eating his meal, you can foil him neatly by gluing discarded rubber jar rings to the bottom of his dish. It will prevent a lot of needless spilling, too.

And, if your dog is a garbage can investigator (it happens in the best of families), and accidentally knocks over the garbage pail too often to be comical, you can outsmart him by driving a few wooden stakes into the ground around the garbage pail to prevent it from tipping over.

And, don't be annoyed when that cute puppy chews your best slippers

to bits. He does it because he loves you. As I said before, he does it because he has heard you complain that your "dogs" are killing you, and he thinks he is attacking the cause . . . besides, it beats having him chew on your toes, doesn't it? V

Ranch House Built in 1833

STONES that make a prison could also make a castle—the same can be said for a barbed wire fence. Although Winston C. Parker (C is for Churchill) of Millarville, Alberta, lives quite happily behind the fenced boundaries of his ranch today, he can remember when barbed wire had a less happy connotation. Winston spent three years behind the fence of a German prison camp, when his plane was shot down during World War II.

After he was discharged in 1946, Parker bought "Monea Ranch," which was settled by the Deane-Freeman family in 1833. The present ranch house, one of three pioneer homes still in use in the district, contains the original 22' x 28' log cabin built by the Deane-Freemans when they first arrived. Also discernible are the remains of a polo field down on the flats.

On his 700 acres, Winston runs about 130 head of commercial cattle and produces most of his own feed grain and hay. In the last few years he has acquired quite a reputation as a grower of registered seed. This year he'll be planting his third crop of a new barley developed by the University of Alberta, and recommended by the Varietal Zonation Committee for the central and northern parts of the Province.

First licensed for sale in 1953, the barley was founded on a Newall-Olli-Olli cross. It's a six-row, smooth-awned variety that has a strong straw, matures a little earlier than Olli, and has steadily outyielded the latter in the black and grey-wooded areas of Alberta.

Even when hit quite hard by hail last year, one of Winston's fields ran 55 bushels to the acre, and a more sheltered field produced up to 63 bushels per acre.

"It stools out very heavily," he explained, "so you don't need to plant as much. I used only 20 bushels of seed on 22 acres last year, and still averaged about 60 bushels to the acre."

Although the new barley was developed as a malting variety, it hasn't yet been accepted as such by the final authorities. But there is every indication that it will make malting grade in the near future. V



Roy McCann, U.G.G. agent, caught this 1956 flood scene at Westbourne, Man.

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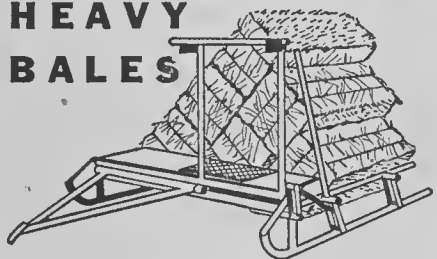
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No. 6

Research in Farm Economics

FARM organizations, at least in some parts of Canada, are more and more realizing the need for much more research in agricultural economics than has been done in Canada up to the present time. Certainly the trend toward lower farm prices and lower net farm incomes during recent years has contributed substantially to increased interest in economic problems.

There is an understandable tendency at the present time to assume that because of lower prices and a world-wide tendency toward increased production, marketing research is the greatest present need of the industry. This is true, to some extent, but it is principally true because there has been so little research in the marketing of farm products up to the present time. For this reason, the addition of a marketing specialist to the Department of Agricultural Economics at the University of Manitoba, is particularly welcome.

Economists, as social rather than physical scientists, can never be as precise as the physical scientists in their conclusions, largely because the facts with which they work are valid only for the moment of discovery or investigation. Where large numbers of human beings are involved, facts relating to prices, quantities and demands are highly fluid in their relationships with each other. This is particularly true in the special field of agricultural economics, where the influences brought to bear on both production and marketing are much more numerous and less predictable, than for any other group of people and products one can think of. Nevertheless, though the agricultural economist can never be as precise in his calculations as the chemist or the physicist, his work and his increasing knowledge of the way in which economic forces operate, are becoming more and more necessary as our civilization becomes increasingly compact and orderly. If farmers feel, as many do, that agriculture in normal circumstances operates under a serious handicap as compared with other elements in society, it is a certainty that these handicaps will never be removed until there is a much more general and widespread appreciation of the importance of the economist and his work.

Only one Canadian province today may be said to even approximate adequate attention to agricultural economics. That province is Ontario, where, in addition to some 15 economists working in the Economics Branch of the Ontario Department of Agriculture, there are 11 others in the Department of Agricultural Economics at the Ontario Agricultural College. We doubt if there is an equal number of agricultural economists in government or university service in all the rest of Canada, outside of the Canada Department of Agriculture. True, Ontario's farm output regularly leads all provinces—though it has been surpassed by Saskatchewan; but in any case it represents only one out of every four Canadian farm families. If Ontario has not been extravagant in its expenditures in this field, the other provinces must be regarded as having been too shortsighted, if not definitely backward.

Nor is the Federal Department altogether free of this complaint. For a time it appeared that the Canada Department of Agriculture was developing a very satisfactory service in agricultural economics, but during the post-war years there have been signs that pressures within the government have tended to curtail work that could, and should, be done by the Economics Division of the Marketing Service. There is evidence that too many good men have left the service, presumably because the outlook for promotion and satisfactory useful work has been too limited.

It is characteristic of agricultural research in Canada that it has never been able to proceed as confidently and relatively as fast as research in the non-agricultural sectors of the economy. Farmers are not able to develop their own research programs. They must depend on public funds to a large extent, and on piecemeal contributions toward university research by industrial concerns. Such companies, quite understandably, are inclined to direct their contributions toward projects in which they have some special interest. In most provinces at least, research grants of this nature are seldom directed to any aspect of agricultural economics.

Research in farm economics, on the whole, has been less well supported by both government and industry than research in almost any other field, and it is time that something was done about it. Farmers and their organizations, between them, have a very vital interest in this type of work, in none of which should farmers individually be expected to show a keener interest, than in that of farm management and production economics generally. V

A Step Forward

CANADA'S 25th National 4-H Club Week will be held this year in Toronto, on November 10 to 15, which coincides with the period of the Royal Agricultural Winter Fair.

Unlike the National 4-H Club Weeks of other years, it will not be marked by national judging competitions. In line with a recommendation on this page, in our February issue, the annual meeting of the Canadian Council on 4-H Clubs held at Saskatoon in March, advised the discontinuance of these competitions at the national level. After some weeks of study by a special committee, this decision was confirmed at a meeting of the Executive last month, when the theme "4-H and our National Heritage" was chosen for 1956.

It is gratifying to learn that the Executive of the Council felt able to make the change in policy effective this year, and that a more comprehensive and worthwhile national objective can now be put before the 75,000 4-H club members in Canada. Striking developments have taken place in agriculture since World War II. Canadian agriculture has world-wide affiliations, and these may be expected to increase rather than decrease in the years to come. It has, therefore, become more and more important that the farm young people, who will be the farmers of the future, should find in the 4-H club movement an opportunity for broadening their approaches to the problems of agriculture in relation to other segments of our national economy and to the world in general. The Canadian Council on 4-H Clubs is to be congratulated on this forward step. V

Agricultural Degree Courses

THE striking post-war developments in industry and in agriculture have forced the faculties of agriculture in several Canadian universities to seriously reconsider the courses that are taught leading to a degree in agriculture. There has already been a general raising of entrance standards, so that in most institutions the completion of a high-school education is now required before entering upon a university degree course. There is a general feeling that it is not yet practicable to extend degree courses beyond four years; and the problem which faces faculties of agriculture at the present time is to decide how best to use this limited four-year period for the benefit of the graduating student.

Up to about 1940, around 80 per cent of the agricultural college graduates working on salary in Canada were employed by provincial or federal governments. Today, that proportion has been substantially lowered by the greatly increased numbers of graduates who have been employed by non-governmental organizations and by industry. Along with this change has come a very pronounced emphasis on science in agriculture, as a result of the significantly greater impact of science on farm practice. So pronounced has been this development that certain Canadian universities have come to consider that the principal function of a university

faculty of agriculture is to turn out science specialists. From certain quarters the view has been expressed that in the past, the best basic training for work in agricultural science is obtained in an arts faculty, because it was held that the courses in biology, physics and chemistry taught there are more fundamental, and therefore better suited as background for the work of a research scientist. In recent years, too, the extension services of provincial governments and of private industry have been expanded. Canadian university degree courses have hitherto paid too little attention to the special requirements of this type of work.

At the recent annual meeting of the Manitoba Institute of Agrologists, the general question of developing suitable curricula to meet these several needs was discussed at some length. Members of a three-man panel discussed the requirements of employers of agricultural graduates under three headings: science; industry; and extension, public relations and journalism. Discussion from the floor combined to make the period one of general usefulness. Perhaps one of the most interesting statements was made by a representative of industry who stated that university graduates are employed every year as potential management material and that in recent years, in industries ancillary to agriculture, such as the meat packing industry, agricultural graduates have been increasingly selected. What was most significant to us, however, was the fact that our universities, by their serious concern with the nature of the courses given to students, and by their recognition of the changes which have been taking place in agriculture and in industries relating to agriculture, have given evidence of a keen appreciation of their responsibilities to agriculture, and to the young people who come to them for training. V

Final Wheat Payment

SOMETHING in the neighborhood of 300 grade classifications are involved in the final payment which was commenced on May 22 for wheat delivered during 1954-55. In all, 318,439,061.2 bushels are involved for which producers will receive a final payment totalling \$39,679,620.35. Payments for individual grades vary from 6.553 cents for No. 5 wheat to 65.088 cents for Damp No. 3 Canadian Western Amber Durum.

A perusal of the grade list without considering the amounts listed as final payments to producers, leaves one with mixed feelings. The first impression is one of amazement at the development of a grain grading system which permits the grain inspectors to separate such a large number of classifications with the precision represented, for example, by No. 1 Manitoba Northern, on the one hand, and Rejected No. 1 Manitoba Northern Mixed Rotten Kernels Sour, on the other. Even more remarkable is "Rejected No. 1 Canada Western Mixed Grain Mixed Heated Rejected Mixed Gravel," for which, incidentally, 23.383 cents per bushel was the final payment.

A second impression is one of amazement that so many grades, and grade classifications are found necessary to properly classify and price the wheat delivered to the Canadian Wheat Board during a single crop year. A little study of the list justifies its length, but fails to explain how the Board of Grain Commissioners, the Elevator Companies and the Wheat Board are able to co-operate in keeping all these classifications separated, to the point where the Wheat Board can finally issue cheques on the basis of Tough Rejected No. 3 Manitoba Northern a/c Rodent Excretion, on the basis of 17.608 cents per bushel. The world's marvels are by no means confined to the world of nature, or to the mysteries revealed under a high-powered microscope.

Whether \$39 million will be enough to go around with reasonable adequacy may be another question. The decision of the Federal Government to share the costs of storage has been of considerable value; and inasmuch as the Government now assumes responsibility for selling policy, it is undoubtedly reasonable, in this period of international surpluses, that it should contribute to the abnormal storage costs associated with large and continuing carry-overs. V